Risk and Promotive Factors of Social and Emotional Wellbeing for University Students: Adversity and Resilience

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Risk and Promotive Factors of Social and Emotional Wellbeing for University Students: Adversity and Resilience

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Declaration

I, Mohammed Munahi Alsubaie, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis. I confirm that no part of the material offered has previously been submitted by me for a degree in this or any other University. This thesis was prepared in accordance with the guidelines outlined by Durham University's Graduate School and in the Department of Psychology's Postgraduate Handbook.

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Thesis Abstract

The prevalence of depression in university students is increasing and attributable to academic, financial and social stressors. Other factors that place students at a higher risk of experiencing depression include adversity in childhood and present. However, there are crucial promotive factors that support students and induce resilience, such as social support, hope and coping strategies. Despite the growing number of studies focusing on risk and promotive factors among students, there is a lack of a multidimensional approach to these factors. Thus, three studies were conducted to better understand such factors in university students by implementing a cross sectional design using online surveys. Study one showed that childhood adversity current adversity and lack of sources of social support were significant predictors of depression, poor academic performance, and a low quality of life. In study two, dissociation had significant positive relationships with current adversity and depression as well as a significant negative relationship with academic performance. Study three revealed that hope, coping strategies, social support from significant others, university belonging and university support were significant predictors of resilience, while hope, university support, and university belonging were the only significant predictors of academic performance. Further, lack of hope, coping strategies, social support from significant others and university belonging were significant predictors of depressive symptoms. From these results, the present thesis contributed to the scientific knowledge in the literature by tackling multidimensional risk and promotive factors for the wellbeing of university students that previous studies may have failed to capture. The results can help universities in designing a holistic preventive and intervention programmes for students. Future research might focus on longitudinal approach to reach deeper understanding of these variables.

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CHAPTER ONE

General Introduction

1. General Introduction

1.1 Mental health, and stressors of social and emotional wellbeing of University students

The World Health Organisation (2015) defines mental health as a condition of wellbeing in which individuals recognise their own capabilities, can manage to deal with adversity and recover from daily stressors, can work efficiently and constructively, and are capable of making a positive impact on their communities. This conceptualisation of mental health represents a considerable advancement with regards to moving away from the identification of mental health as only focusing on the absence of mental health problems. Instead, it classifies positive emotional states and positive functioning as crucial aspects of mental health, which is in line with the positive influence of promotive factors of mental health and wellbeing that will be discussed in the present thesis.

On the other hand, according to the World Health Organisation (2017), depression is a common mental disorder identified by characteristics such as feelings of sadness, loss of interest in things an individual usually enjoys, and difficulty managing daily activities. However, this definition fails to provide detailed information about depressive symptoms. Therefore, this thesis will use the American Psychiatric Association (2017) classification of depression: a common mood disorder that has adverse effects on how individuals feel, think and act; such negative effects encompass feelings of sadness, loss of enjoyment, and other emotional and physical issues that lead to low functioning in activities of daily living. Moreover, this classification requires five of the following symptoms to be present for a diagnosis of depression: depressed mood; loss of interest; low energy; significant weight loss or gain; change in sleeping patterns; psychomotor agitation or retardation; feelings of worthlessness or guilt; difficulties in thinking, concentrating or making decisions; thoughts

of death; or suicide attempts. The five symptoms must have been experienced over at least a 2-week period, to meet criteria for a diagnosis of depression.

In the United Kingdom, the increasing number of individuals attending higher education institutions, such as universities, has created strains on students, as well as making the education process and requirements more demanding (Andrews & Wilding, 2004; Department of Education, 2016). The United Kingdom's provisional Higher Education Initial Participation Rate report for the 2014/15 academic year revealed that the participation rate (more students enrolled at University than previously) was increased by 1.7% compared to the 2013/14 academic year. This increase resulted from more individuals seeking university education in this age group with the number of students increasing by approximately 12,000 (Department of Education, 2016), suggesting that increasing numbers of university students might be linked to more students at risk of depression, with prevalence rates for this age group ranging from 10% to 85% (Ibrahim, Kelly, Adams, & Glazebrook, 2013).

Depression is one of the most common public health disorders, and is associated with high levels of disability (Ibrahim et al., 2013). The prevalence rates in Europe have revealed that in a lifetime approximately 9% of men and 17% of women experience depression (World Health Organisation, 2016). A systematic review focussing on university students found that the weighted mean incidence of depressive symptoms was 30.6%, whereas the rate reported for the general population was 21.6% (Ibrahim et al., 2013). In the United Kingdom, a survey that recruited a national sample comprising 12,000 university students recently showed that 80% of participants experienced stress, 55% experienced anxiety, and 49% experienced depressive symptoms (Brown, 2016). These rates are far greater than the prevalence rates reported in the previous systematic review for both students and the general population. The variation in prevalence rates across the

literature could be attributed to different measures used, categories of depression included, sample sizes, and cultural differences. Regardless, the prevalence rates for depression are much higher among students than they are in the general population, suggesting that students are vulnerable to the risk of experiencing depressive symptoms while attending university (Ibrahim et al., 2013).

Stressors have been shown to be linked to the development of depression (Andrews & Wilding, 2004). A contributor for this could be that for young people, university coincides with a critical stage of psychological development. Students are acquiring new skills, improving their knowledge levels, gaining opportunities to have novel experiences, engaging in activities, and widening their social connections in their communities. The university experience brings significant challenges and stressors, and as a result, for many students attending university can be considered a stressful life event as this population encounters transformations in community, close relationships and lifestyle (Bayram & Bilgel, 2008; Ibrahim et al., 2013; Steptoe, Tsuda, & Tanaka, 2007). Academic performance is also connected to university students' vulnerability to stressors during this time of development (Beiter et al., 2015). The experience of learning is more challenging, involving a higher volume of demands than are evident in secondary schools. The developmental stage of this age group (most common undergraduate age) represents the transition from adolescence to young adulthood and is associated with substantial strains such as the requirement to experience roles of higher independence and having the chance to deal with daily life responsibilities (Lenz, 2001). While this transition occurs, young individuals have the opportunity to discover their abilities and think about their life path for the future, which also places more stress and challenges on them. For many individuals in this age group, attending university is their first experience of living away from their family and local community for an extended period.

LGBTQ+ individuals also are at a higher risk of depressive disorders. Studies have indicated elevated rates of depression and mood disorders amongst LGBTQ+ students and adults (Bostwick, Boyd, Hughes & McCabe, 2010; Cochran, Mays & Sullivan, 2003; Kulick, Wernick, Woodford, & Renn, 2017), and LGBTQ+ youth are more likely to report suicidal thoughts or attempts (Fergusson, Horwood, & Beautrais, 1999). Such evidence demonstrates that LGBTQ+ individuals, such as students, might be more vulnerable to depressive symptoms, putting more pressure and stress on such individuals in addition to the stress resulting from the university experience itself.

Other individuals thought to be prone to increased levels of depression are students with disabilities such as autism and dyslexia. Many youths with disabilities experience social difficulties and relatively low levels of wellbeing, including depression (Fleming, Edwin, Hayes, Locke & Lockard, 2018; Siperstein, Parker, Bardon, & Widaman, 2007; Sterzing, Shattuck, Narendorf, Wagner, & Cooper, 2012). In contrast with their peers without disabilities, students with such conditions are vulnerable to being disliked and to experiencing problems of acceptance (Boer, Pijl, Post, & Minnaert, 2013). Likewise, students with disabilities are likely to have lower rates of social connection, have higher levels of social isolation (Farmer et al., 2011) and, in turn, increased levels of mental health issues such as depression (Fleming et al., 2018). Students with disabilities are thus at risk of experiencing considerable stressors while at university.

While these stressors and prevalence rates of depression are informative for the university population and authorities by providing details regarding possible contributors of depressive symptoms, there are other factors that place students at a higher risk of experiencing depression. There are *risk factors* such as adverse experiences that increase vulnerability for depression, and there are *promotive factors* that play a significant role in promoting wellbeing and protecting individuals from experiencing depressive symptoms,

such as social support networks (Bukhari & Afzal, 2017). The high worldwide burden of depression in young people is affected by such risk and promotive factors in the psychological and social domains. Thus, the crucial public health implication of examining both risk and promotive factors as a holistic picture is that this can lead to a deeper understanding of students' mental health and inform the design of preventive measures. Such early interventions may decrease symptom severity and prevent comorbidity among university students.

1.2 Risk factors for the social and emotional wellbeing of University students

Childhood adversity (ChA) has been associated with increased risk for a range of mental health disorders including depression (Infurna et al., 2016). Research has determined that the occurrence of ChA among university students is comparable to the occurrence rates in other populations ranging from 21% to 79.4% (Rutter,Weatherill, Krill, Orazem, & Taft, 2013; Anders, Frazier, & Shallcross, 2012; Mall et al., 2018; McGavock & Spratt, 2014; Yan, Jiao, Lin, & Jiao, 2009). However, for young university students there is the additional stress associated with the transitional developmental phase from adolescence to adulthood and thus likely to be at a higher risk of responding negatively to adversity (Muller, 2016). Individuals with a history of ChA are more vulnerable to social and emotional problems than those without such experiences (Chapman et al., 2004). Moreover, elevated levels of stressors and adversities in university increase the severity of mood disorders (Mall et al., 2018). Depression has been shown to be one of the most common mental health problems associated with childhood or current adversity (Infurna et al., 2016; Mall et al., 2018; Min, Singer, Minnes, Kim, & Short, 2013). The combination of ChA with current adversity may result in a substantial negative effect on the social and emotional wellbeing of university students. Indeed, individuals experiencing current

adversity with a history of ChA are more likely to report mental health problems including depression (Mall et al., 2018).

While there is some evidence for the influence of adversity on mental health which will be discussed in detail in Chapter 2, there are still several limitations in the literature including limited examination of the university student population with respect to the present thesis variables, either in detail or as a holistic picture. Furthermore, there is a lack of literature focussed on protective factors for university students.

1.3 Promotive factors of the social and emotional wellbeing of University students

There are some crucial promotive factors of wellbeing that have been shown to provide significant support during and after the transition to university life such as social support. Social support can play a significant role in managing critical times such as transitioning periods and has been shown to be beneficial as a buffer against adverse experiences (Brummett et al., 2005; Dollete & Phillips, 2004). Accordingly, it is essential to focus on specific sources of social factors affecting university students' wellbeing such as social support from family, friends and significant others (partners and close relationships).

Although there is some evidence in the literature as will be discussed in details in Chapter 2 about the influence of social support on decreasing the risks of negative social and emotional outcomes, and in enhancing positive outcomes such as quality of life (QoL). There are several limitations to these studies. A major limitation is the paucity of research on the impact of social support on quality of life and most of the studies focussed on medical university students (Dafaalla et al., 2016). Thus, the findings may not be generalisable to other university students.

Some studies have shown that social support alone is not enough to reach the most positive outcomes compared to multiple promotive factors in order to reduce depressive symptoms and induce improved wellbeing (Galatzer-Levy, Burton, & Bonanno, 2012; Mello, 2016; Nurius, Logan-Greene, & Green, 2012), rather, it should be one component of prevention and intervention programmes along with resilience (DeRosier, Frank, Schwartz, & Leary, 2013; Hartley, 2012). The transition into the university setting requires greater levels of adjustment for students to adequately cope with academic stress and adversity while balancing a myriad of university and life demands. It is important to transition well into university and recover from challenging situations and adverse experiences in order to reduce the risk of experiencing depressive symptoms and induce positive academic performance (Pidgeon, 2014; Pratt, 2000). This ability is referred to as resilience, defined by (Rutter, 1985) as a dynamic process that involves external and internal promotive factors with the ability to overcome stress and adversity as will be discussed in detail in Chapter 4.

Research has shown that resilience plays a vital role in university students' mental health (Byrd & McKinney, 2012; DeRosier et al., 2013; Souri & Hasanirad, 2011), with lower levels of wellbeing and adjustment being linked with lower levels of resilience (Innes, 2017). In this manner, depressive symptoms have been shown to be associated with a lack of resilience (Hamdan-Mansour, 2015). This assumption is supported by research that identified a lack of resilience as a strong predictor of depressive symptoms among university students (Bastaminia, Bani Hashemi, Alizadeh, & Dastoorpoor, 2016; Kitzrow, 2003). Consequently, this approach can be used for improving mental health through the adoption of suitable interventions that promote resilience in this population. Nevertheless, it is important to identify what promotes resilience among university students by considering a multidimensional construct of the promotive factors of resilience consisting

for example, hope, social support, university belonging and university support which will be addressed in Chapter 4. This will inform effective preventive and intervention programmes that assist students in successfully transitioning and adjusting to university while increasing their wellbeing.

Whilst research evidence in the literature as will be discussed in details in Chapter 4 shows the important role of promotive factors such as hope, coping strategies, social support and belonging on students' resilience levels and successful transitions to the university level, there are gaps existing in the literature. For example, these studies did not widen the investigation by including multiple dimensions of internal and external factors, which may hinder a holistic understanding of such promotive factors.

1.4 General Aims

To bridge the knowledge gaps in the literature, the present thesis aimed at examining the risk and promotive factors for the social and emotional wellbeing for university students. Using a cross-sectional design with an online survey, Chapter 2 examines the influence of adverse experiences and sources of social support on three key variables, namely, depression, academic performance and quality of life. In Chapter 3 the association between dissociative disorder and three key variables, specifically, depressive disorder, current adversity and academic performance is explored by using self-report measures and structured clinical interviews. Finally, Chapter 4 investigates the influence of a construct of promotive factors consisting of three levels (individual, family, community) on resilience, depression, and academic performance, using online surveys as a research method. The findings of this thesis will contribute to the scientific knowledge in this field by addressing the risk and promotive factors for the wellbeing and adjustment of university students, and this can inform the services provided for students.

CHAPTER TWO

Study 1: Adversity and sources of social support as risk and promotive factors for the mental health and wellbeing of university students

2.1 Introduction

2.1.1 Definitions and prevalence rates of childhood and current adversity

Research into childhood adversity (ChA) has increased in the last two decades, and yet there remains a lack of agreement on a definition of ChA. This inconsistency might be attributable to the different types of ChA included, differing opinions on what should be considered ChA, and the different measures used to assess ChA. The continuing lack of an agreed definition of ChA represents a challenge in this field of study and suggests that more efforts are needed to reach a concrete definition. Several robust definitions of ChA have been proposed in the literature centred around the measurement instrument or types of adversity being examined. For example, ChA was defined as unpleasant experiences of physical, psychological or sexual abuse along with low levels or poor healthcare prior to the age of 17 years (Briere, 1992). However, this definition did not include neglect, which is a limitation.

Despite the inconsistency of definitions in the literature, most research on ChA has relied on a broad definition of difficult and unpleasant events or experiences consisting of physical, sexual or emotional abuse, neglect, and/or poverty occurring during childhood or adolescence (Kessler et al., 2010). Therefore, in line with this broad perspective, the operational definition of ChA in this study will be based on the definition provided by Smith, Lam, Bifulco, and Checkley (2002), which refers to difficult experiences of parental care (neglect, antipathy), sexual abuse, and/or physical abuse prior to the age of 17 years. This definition encompasses broad types of adversities and includes neglectful experiences with parents or caregivers who have a significant role in raising the child at this age. In

addition, this definition covers experiences that occur throughout both childhood and adolescence.

Definitions of current adversity (CuA) on the other hand have stemmed from seminal observations of behavioural kindling (illustrated as a process where the first experience of depressive symptoms triggers an individual to CuA, and thus following experiences require less stress to provoke the recurrence of depression) and stress sensitisation by Post (1992), who asserts that psychological stressors play a role in triggering the first experience of mental health problems in individuals. Stress can derive from various sources in daily life. For university students, stress and mental health problems might be induced by academic difficulties, financial problems, illness or health issues, loss of a family member, or close relationships (Andrews & Wilding, 2004; Sokratous, Merkouris, Middleton, & Karanikola, 2013). Incidents that induce stress are referred to as stressors or adverse experiences. In line with this perspective, the operational definition of CuA for this study is derived from Wagner, Compas, and Howell (1988), whose definition covers multidimensional current adverse experiences and stressors. It has been defined as threatening experiences such as illness, death of parents and financial crises that can induce physical and/or mental health problems given that stress is considered to be a physiological and neurological mechanism that provokes reactions in the body meant to cause changes when such stressors experienced (Dusselier, Dunn, Wang, Shelley, & Whalen, 2005; Franken, 1994).

ChA has been shown to be prevalent worldwide and is a known prominent risk factor for mental health problems (Kessler et al., 2010). Prevalence rates of at least one type of ChA across different studies and countries range from 38.4% to 89% (Hovdestad, Campeau, Potter, & Tonmyr, 2015; Kessler et al., 2010). Such rates show wide variation across studies, which are likely due to the instruments used, different procedures

implemented, disregard of some ChA types in certain countries, and the inclusion of low-income countries. For example, individuals in low-income countries are living in dangerous conditions, such as being exposed to violence and poverty, which may exacerbate the experience of ChA and induce higher prevalence rates (Benjet, 2010). Even the lower end of the prevalence range for ChA is high and suggests high risk for mental health problems.

In the United Kingdom, several nationally representative surveys with samples aged 18 years and older found that approximately 47% of participants reported at least one type of ChA (Bellis et al., 2015; Bellis, Hughes, Leckenby, Perkins, & Lowey, 2014). These prevalence rates of ChAs are reflected in different populations globally, with evidence from the United States, Canada, Norway, and other countries revealing that between 55.4% and 90% of participants had experienced at least one type of ChA (Campbell, Walker, & Egede, 2016; Chartier, Walker, & Naimark, 2010; Larsson et al., 2013; Mouton, Hargreaves, Liu, Fadeyi, & Blot, 2016; Prokopez et al., 2018).

ChA in university students is comparable to that of other populations (Rutter, Weatherill, Krill, Orazem, &Taft, 2013; Anders, Frazier, & Shallcross, 2012). Evidence from studies of university student samples in the United Kingdom and worldwide has revealed that the prevalence rates of at least one type of ChA reported ranged from 21% to 79.4% (Mall et al., 2018; McGavock & Spratt, 2014;Yan, Jiao, Lin, & Jiao, 2009). On the other hand, CuA and stressors have also been shown to be prevalent in the literature (Mall et al., 2018), evidence from studies of university students found that the prevalence rates with at least one type of current adversity ranged from 31.2% to 90.7% (Firth, 1986; Mall et al., 2018). The wider variation in prevalence rates is likely to be reported due to the developmental stage of young people, novel demands and stressors experienced in university life. Unlike with ChA, most of the literature surrounding CuA did not report

prevalence rates and the number of adversities experienced, and so it is important to address this aspect.

2.1.2 Risk factors for wellbeing

2.1.2.1 Childhood adversity (ChA)

Considerable evidence has shown that ChA is a significant predictor of depressive symptoms and has a significant positive relationship with depression (Abela & Skitch, 2007; Bifulco, Brown, Moran, Ball, & Campbell, 1998; Bifulco, Moran, Baines, Bunn, & Stanford, 2002; Gallo et al., 2017; Gibb et al., 2001; Gibb, Butler, & Beck, 2003; Infurna et al., 2016; MacMillan et al., 2001). The majority of studies have focused on specific types of ChA as significant predictors of depression (Cutajar et al., 2010; Dube et al., 2005; David M. Fergusson, Boden, & Horwood, 2008; Infurna et al., 2016; Molnar, Buka, & Kessler, 2001). For example, empirical studies and systematic reviews of adolescents and young adult populations have found that childhood physical and sexual abuse were significant predictors of depression and had a significant positive relationship to depressive symptoms (Fergusson, McLeod, & Horwood, 2013; Lindert et al., 2014; Mersky, Topitzes, & Reynolds, 2013; Yen et al., 2008). Although these studies provide valuable evidence about the impact of physical and sexual abuse on depressive symptoms, they focused on just one type of adversity and only on mental health outcomes. They did not consider emotional abuse or neglect, and focusing on a single type of adversity or only mental health outcomes may hinder our understanding of such elements. Lacking a holistic picture of these experiences might result in the design of insufficient preventive programs for individuals.

Other researchers have proposed that childhood emotional abuse such as degradation, rejection and isolation may have a more significant impact on mental health, specifically depression, than either physical or sexual abuse (Alloy, Abramson, Smith,

Gibb, & Neeren, 2006; Shapero et al., 2014). For instance, studies of university student populations have found that emotional abuse, reported by 10.7% to 55.7% of the participants, was a significant predictor for depression and was significantly linked to various other mental health problems, including anxiety and paranoia. Moreover, the students who experienced ChA were more likely to report higher levels of such symptoms than those without ChA (Vidourek, 2017;Yan et al., 2009). These findings show that emotional abuse has a significant impact on depression and mental health.

Similarly, attachment theory proposes that early experiences with family or caregivers are significant factors in a child's development (Bowlby, 1983). Thus, emotional abuse or the experience of neglect at this stage of development might be specifically maladaptive because such negative attachment experiences can increase negative thoughts about the self and others, causing depression and other mental health problems (Shapero et al., 2014). In support of this, previous studies have provided evidence for various types of interactions between family or caregivers and a child are significantly linked to the various pathways of emotional regulation related to depression (Mahen, Karl, Moberly, & Fedock, 2015) and have a link with vulnerability to developing depressive symptoms (Gibb et al., 2003; Infurna et al., 2016). This again suggests the importance of early life experiences for an individual's development, specifically with regard to emotional neglect and abuse by family members. Although findings from these studies reveal the prevalence of emotional abuse along with their negative impacts on students' mental health, such evidence is limited to specific types of adversities. Therefore, they may provide insufficient data and may not capture the holistic influence of multiple adversities on students' mental health, thus such lack of investigation can make it harder to tackle all types of ChA. Moreover, focusing only on mental health outcomes and not looking at social and/or academic aspects may contribute to a lack of information and a

limited picture of students' university experiences, which could, in turn, lead to insufficient programmes for student mental health.

Academic performance as defined as the result of a student's belief in their ability to organise and execute the kind of stable actions required to succeed in school and the workplace (Chemers, Hu, & Garcia, 2001), is also negatively influenced by the experience of ChA (Borofsky, Kellerman, Baucom, Oliver, & Margolin, 2013; Coohey, Renner, Hua, Zhang, & Whitney, 2011; Dusselier et al., 2005; Kaloeti et al., 2018; McMillen, Auslander, Elze, White, & Thompson, 2003; Misra & McKean, 2000). However, these studies report conflicting findings. For instance, a study of 262 young people showed no significant relationship between ChA and poor academic performance (Dusselier et al., 2005), yet findings from another study indicate a significant positive relationship between ChA (emotional neglect, physical abuse, physical neglect) and repeating a grade level in school (McMillen et al., 2003). Another study of 702 students aged 6 to 10 years found that the severity, rather than number, of childhood adversities predicted difficulty with math, explaining 39% of the variance on math scores (Coohey et al., 2011). Also, severe ChA were not significant predictors of reading scores, but on the other hand, violence and specific types of adversities such as physical abuse and neglect were significant predictors of low reading scores and explained the elevated levels of variance (54%) on reading scores (Coohey et al., 2011). These contradictory findings may be due to the considerable variation of instruments used in the literature for both childhood adversity and academic performance; such instruments may differ in categories included, scoring criteria, number of sample size and different methods used.

Previous studies of adversities and academic performance have predominately focused on single types of ChA, such as family conflict, aggression from peers and community violence, and do not consider other adverse experiences that young people may

encounter at school, at home or in the wider community or their overall impact on academic performance and outcomes (Borofsky et al., 2013; Espinoza, Gonzales, & Fuligni, 2013; Malley, Voight, Renshaw, & Eklund, 2015). One study of 443 university students found that those with low Grade Point Average (GPA) scores reported more ChA than other students (Kaloeti et al., 2018). Although this study provided evidence for the significance of different levels of ChA in regards to academic work based on overall GPA, this was not one of the main variables and was not examined by a measure of academic performance. Instead, it was self-reported by the participants and mentioned only partially in the analysis. Thus, more reliable and in-depth information could be gleaned by implementing a reliable and valid measure of academic performance.

Quality of life (QoL) is defined as a multidimensional concept encompassing the positive and negative aspects of psychological, social, environmental, and physical health (Zhang et al., 2012). While the impact of adverse experiences on mental health is well documented in the literature, it has been shown that adversities also have significant negative impacts on quality of life throughout the lifespan. Research evidence and systematic reviews of studies of different age groups show that adversity is a significant predictor of, and has a significant negative relationship with, a poor QoL (Afifi et al., 2007; Corso, Edwards, Fang, & Mercy, 2008; Jernbro, Tindberg, Lucas, & Janson, 2015; Jud, Landolt, Tatalias, Lach, & Lips, 2013; Mohammed & Abdel Kader, 2016; Villalonga-Olives et al., 2010; Weber, Jud, & Landolt, 2016). For example a European study of students aged 15 years revealed that ChA had a significant negative relationship with quality of life, and that the number of ChA types was linked with decreased quality of life (Jernbro et al., 2015). Although these studies provide evidence of the negative impact of adversities on QoL, some of these studies focused on specific types of adversities, and others reported on the overall scores of quality of life without stating the contribution of

specific domains. One of these studies recommended that future research should include a more comprehensive examination of these variables and student academic experience, which may help to identify the most beneficial methods for improving the quality of students' lives (Mall et al., 2018).

2.1.2.2 Current adversity (CuA)

Current adversity (CuA) has been shown to be associated with elevated levels of depressive symptoms (Andrews & Wilding, 2004; Sokratous et al., 2013). Considerable evidence has consistently shown that CuA has a significant positive association with depression (Hammen, 2005; Kessler, 1997; Li, Zhang, Liang, & Hu, 2016; Paykel, 2003). These studies have been influenced by seminal observations of kindling and stress sensitisation by Post (1992), with the assertion that psychological stressors play a role in triggering the first experience of depression in individuals. More research findings have revealed that CuA is significantly associated with greater levels of depressive symptoms in both adult clinical samples (Mahatme, Dhavale, & Patkar, 1989) and in adult non-clinical samples (Bebbington, Hurry, & Tennant, 1988; Taylor et al., 2006), as well as in adolescent (Williamson, Birmaher, Anderson, al-Shabbout, & Ryan, 1995) and university student populations (Andrews & Wilding, 2004; Mae Lynn, Carmen, Luis, Alba, & Guillermo, 2013; Sokratous et al., 2013). For example, two systematic reviews of different samples found abundant evidence that CuA is consistently a significant predictor of depressive symptoms and has a significant positive relationship to depression (Christopher, 2002; Li et al., 2016). These systematic reviews revealed rich evidence of the critical role of CuA and stressors on depressive symptoms. However, such evidence was focused on mental health outcomes, which may hinder getting a holistic picture for understanding the experience of CuAs and stressors.

Further, CuA and stressors (less severe compared to CuA) have been shown to have a significant positive relationship with depression such that these adversities may induce depression among students. For example, several studies of university student samples found that CuA and stressors were significant predictors of depressive symptoms and had significant positive relationships to depression (Andrews & Wilding, 2004; Mae Lynn et al., 2013; Sokratous et al., 2013). The results of Andrews and Wilding (2004) study showed that women reported a significantly greater prevalence of three types of CuAs: break-up of a relationship, moving away from home, and illness. Moreover, the regression model predicted that the depression was best explained by the variance of those three adversities and stressors which were all accompanied by risk of suicide among the women respondents. Similar situations, other than the break-up of a significant relationship, best explained the variance for men students (Mae Lynn et al., 2013). Another of these studies found that CuA (occurring within the previous 12 months) along with the severe stress caused by these adversities increased the odds ratios (OR = 3.03) of experiencing depression (Sokratous et al., 2013). In the United Kingdom, a study of university students found that CuA, particularly financial difficulties, were the most significant predictor of depressive symptoms, while relationship difficulties was a significant predictor of anxiety (Andrews & Wilding, 2004). These studies show that CuA significantly increases the risk of depressive symptoms among university students. However, given the scope of these studies, the variables examined were limited by not considering other unmeasured variables that increase vulnerability to depression such as ChA. Information on these other variables could provide more robust insights for understanding these experiences among university students.

CuA is also likely to have an adverse effect on academic performance. A significant link between CuA and poor or reduced academic performance among university

students has been documented in the literature (Dusselier et al., 2005; Misra & McKean, 2000). Additionally, research among university students has indicated that CuA and stressors are the major issues having a negative effect on a student's academic performance by deteriorating their physical and psychological health (Dwyer & Cummings, 2001). In particular, high levels of stressors such as financial problems during and after the transition to the university due to adjustment difficulties are seen as making these students vulnerable to a host of social and psychological problems. Consequently, this leads to negative academic outcomes, especially poorer student performance and lower grade point averages (Wintre & Yaffe, 2000).

2.1.3 Promotive factors for wellbeing

2.1.3.1 Definition of social support

Social support has been conceptualized in different ways, either generally or, depending on the type, specifically, as with received or perceived support. One study defined social support as the perception and assessment of social support from other people (Vaux, 1988). Other definitions describe social support as a resource for psychosocial coping that reduces stress while boosting self-efficacy and esteem (Hefner & Eisenberg, 2009; Thoits, 1995). However, these define social support generally, without mentioning specific sources of social support such as significant others (partner, close relationships), friends, and family, or they focus only on the psychological impact of social support.

The present study, on the other hand, aimed to examine the influence of specific sources of social support on students' mental health and wellbeing. In line with this perspective, the operational definition of social support in this study is the amount of support that individuals perceive they receive along with what they actually do receive from various sources, including family, friends, and significant others in close relationships

(Awang, Kutty, & Ahmad, 2014; Zimet, Dahlem, Zimet, & Farley, 1988a). Such a definition is consistent with the study aims by stating specific sources of support and including perceived and received support. Receiving social support is important in itself; however, it is critical that the knowledge of and belief in available social support is considered (Morovati & Rohani, 2008).

2.1.3.2 Social support as a promotive factor for wellbeing

Empirical evidence has consistently shown that a lack of social support plays a significant role in, and can be a predictor of, symptoms of depression, with a particularly negative relationship to depression among children, adolescents and young adults (Barger, Messerli-Bürgy, & Barth, 2014; Barth, Hofmann, & Schori, 2014; Colman et al., 2014; Ellonen, Kääriäinen, & Autio, 2008; Kaltiala-Heino, Rimpela, Rantanen, & Laippala, 2001; Khatib, Bhui, & Stansfeld, 2013; McKenzie et al., 2013; Samm et al., 2010; Stafford, McMunn, Zaninotto, & Nazroo, 2011; Stice, Ragan, & Randall, 2004). Further, social support has been shown to have a significant positive influence on academic performance (Nicpon et al., 2006; Rayle, Kurpius, & Arredondo, 2006; Walker & Satterwhite, 2002) and QoL (Dafaalla et al., 2016; Sirri, Magelli, & Grandi, 2011; H. Yan & Sellick, 2004; Zhou et al., 2010).

Among university students, a lack of social support results in mental health problems, including depression (Bukhari & Afzal, 2017; Hefner & Eisenberg, 2009; Safree & Dzulkifli, 2010). Cross-sectional studies have consistently shown the crucial role of social support for university students' adjustment and health, and that low levels of social support are predictive of mental health problems and associated with greater levels of depression (Alimoradi, Asadi, Asadbeigy, & Asadniya, 2014; Awang et al., 2014; Bukhari & Afzal, 2017; Friedlander, Reid, Shupak, & Cribbie, 2007; Kugbey, 2015). For example,

a study involving university students found that 31% of those who reported low levels of social support also had depression, and 16% of those who reported medium levels of social support had depression, while only 5% of those who reported high levels of social support screened positive for depression (Hefner & Eisenberg, 2009). This demonstrates the important role of levels of social support on the incidence of depressive symptoms. Furthermore, it was found that social support from specific sources, such as family and friends, had a more positive impact on wellbeing (Awang et al., 2014). Despite this powerful effect from family support, friends are typically closer to students as sources of social support than family (Kugbey, 2015) as students seek to have more independence from family at this stage of development. This is supported by a study of university students reporting that a lack of support through friendships is another significant predictor of depressive symptoms (Wörfel, Gusy, Lohmann, Töpritz, & Kleiber, 2016). Although the considerable evidence discussed has demonstrated the importance of general and specific sources of social support for overall good mental health outcomes, including with depression (Gariepy, Honkaniemi, & Quesnel-Vallee, 2016), there is still a need for further research on different types of social support in order to advance our understanding of specific sources that in turn will help to tackle depressive symptoms.

Social support has also been shown to be a significant predictor of positive academic outcomes and acts as a buffering factor against academic stress among children, adolescents and young adult students (Ahmed, Minnaert, van der Werf, & Kuyper, 2010; Nicpon et al., 2006; Rayle et al., 2006; Rosenfeld, Richman, & Bowen, 2000; Walker & Satterwhite, 2002). For example, one study of middle and high school students found that those who had greater levels of social support from family, peers, and teachers reported significantly better academic performance, better engagement in classes and greater satisfaction with their academic experience (Rosenfeld et al., 2000). Moreover, a study of

university students found that participants who reported more social support from parents had better academic performance, higher achievement scores and were less likely to drop out of university (Walker & Satterwhite, 2002). This evidence suggests that social support has a vital role in creating positive academic outcomes for students. However, these studies focused on specific academic outcomes, such as math scores, or on limited sources of social support such as parents, which may limit the generalisation of their findings.

Social connections are beneficial regardless of whether one is under stress or not (Cohen, 2004), and empirical evidence from different populations has shown that social support has a significant positive relationship with QoL (Sirri et al., 2011; H. Yan & Sellick, 2004; Zhou et al., 2010). For example, one study of a clinical sample revealed a positive association between social support and QoL in physical and social dimensions (Sirri et al., 2011). Among university students, there is little research examining the association of sources of social support with QoL domains. There is, however, a focus in the literature on university medical students. For example, one study found a significant positive influence from social support on medical students' mental health and QoL (Dafaalla et al., 2016). Focusing on only medical students is a limitation and may affect the generalisation of the findings. In addition, while systematic reviews on the relationships between social support, depression and wellbeing that included various age groups with a mean age of 20 years showed the crucial role of social support as a predictor of young people's mental health, they did not investigate QoL (Chu, Saucier, & Hafner, 2010; Rueger, Malecki, Pyun, Aycock, & Coyle, 2016). Thus, there is a need for further studies to explore such associations.

The findings discussed previously from various age groups reveal the crucial role of social support from family and parents as a source of protection against depressive symptoms, but a number of the studies focused on general social support, while others

relied on other specific sources of support, such as friends or schoolmates. Therefore, these studies did not consider the multidimensional aspects of social support that could enrich these findings with more data on the spectrum of specific sources of support. Focusing more on specific sources of social support and QoL domains will help to increase our understanding of such associations and to design intervention programs for students' wellbeing.

2.1.4 Summary and rationale

ChA and CuA have been consistently shown to be profound risk factors for mental health problems including depression (Andrews & Wilding, 2004; Battle et al., 2004; Berenbaum, Valera, & Kerns, 2003; Carr & Francis, 2009; Chapman et al., 2004; Hovens et al., 2012; Infurna et al., 2016; R. C. Kessler et al., 2010; Mae Lynn et al., 2013; McLaughlin et al., 2012; Schafer & Fisher, 2011; Sokratous et al., 2013). These adversities are also associated with worse academic performance (Dwyer & Cummings, 2001; Kaloeti et al., 2018) and a poorer QoL (Chan, 2013; Jernbro et al., 2015). Social support on the other hand has been shown to promote mental health (Bukhari & Afzal, 2017; Hefner & Eisenberg, 2009; Safree & Dzulkifli, 2010), maintaining positive academic outcomes (Walker & Satterwhite, 2002) and QoL (Dafaalla et al., 2016). In spite of the evidence discussed in this chapter, there are still a number of gaps in the literature. Firstly, the majority of evidence in the literature from studies of ChA and depression has focused on specific types of adversity, such as physical or sexual abuse rather than examining multiple adversities. Therefore it is important to take a more holistic view of adversity to better understand the impact of adversity. Moreover, focusing only on mental health outcomes and omitting social and academic aspects may contribute to an inadequate picture of students' university experience, which, in turn, could result in designing weak or ineffective programmes for boosting students' mental health and academic experience.

Second, similar to ChA, much CuA research relies on the measurement of mental health outcomes, including depression (Andrews & Wilding, 2004; Mae Lynn et al., 2013; Sokratous et al., 2013). However, the adversity variables examined were limited, and investigating other variables will provide more insight into the experiences of university students. Furthermore, the focus has been on risk factors contributing to reduced academic performance, such as stress on a more general level, or current adversities that encompass various aspects, such as financial or relationship difficulties (Andrews & Wilding, 2004).

Third, numerous social support studies have focused on the impact of general social support on mental health and depression (Barger et al., 2014; Barth et al., 2014; Colman et al., 2014), while others have examined only specific sources, such as friends, and have not considered the multidimensional aspects of social support (Kaltiala-Heino et al., 2001; McKenzie et al., 2013), which could enrich findings. Although considerable evidence has shown the importance of general and specific sources of social support on mental health outcomes, including depression (Gariepy et al., 2016), there is still a need for further research on how different types of social support might predict university students' health, academic outcomes and quality of life. Understanding these factors and widening the focus of research to consider the broader spectrum of both risk and promotive factors is essential to promote more positive outcomes for students and result in enhancing students' overall experiences and adjustment at university. It is also important for university researchers and practitioners to make better informed decisions regarding where to focus efforts for intervention and prevention programmes.

Given the positive impact of such variables on short and long-term wellbeing and adjustment, this area of research needs further attention. A recent study examined the impact of both ChA and CuAon depression (Mall et al., 2018). However, the sample was restricted to first-year students, and the study lacked exploration of promotive factors such

as social support resources (Mall et al., 2018). Moreover, this study recommended that future research should address the impact of ChA and CuA on students' wellbeing, academic performance, and quality of life which is what the present study addressed in order to bridge the knowledge gap by examining the impacts of ChA, CuA, and different sources of social support on depressive symptoms, academic performance and QoL among university students.

2.1.5 Aims and hypotheses

1. The aim was to examine the impact of childhood adversity on depressive symptoms, academic performance, and QoL in university students, with the hypothesis being that ChA will be a significant predictor of increased depressive symptoms and low levels of academic performance and QoL.

2. The aim was to examine the impact of current adversity on depressive symptoms, academic performance and QoL, with the hypothesis being that CuA will be a significant predictor increased depressive symptoms and low levels of academic performance and QoL.

3. The aim was to examine the impact of sources of social support on depressive symptoms, academic performance and QoL, with the hypothesis being that sources of social support will be significant predictors of better academic performance and QoL, while lack of such sources will predict increased depressive symptoms.

2.2 Methods

2.2.1 Research Design

This study implemented a cross-sectional design, using an online survey platform (Qualtrics). This was part of a wider university survey conducted by the Mental Health

Research Group in the School of Medicine, Pharmacy and Health at Durham University, which was conducted to examine risk and resilience for the wellbeing of university students and consisted of 17 questionnaires. The current study aimed to observe the impact of three specific predictors (childhood adversity, current adversity, sources of social support) on the study outcomes related to the social and emotional wellbeing of students at one point in time. The primary outcome was depression, and the secondary outcomes were academic performance and quality of life domains.

2.2.2 Participants

Participants were all Durham University students recruited using random sampling with the inclusion criteria being 18 years old or over, and a registered student at Durham University. The online survey was advertised using various methods across Durham University such as distributing postcards and placing posters throughout the university containing the URL link to the survey. Additionally, invitation emails including the link were sent out to students across all departments and colleges by the Durham University Students' Union (see Appendix 2.4). Further advertisements took place online via Durham University Facebook pages, and Twitter account. All participants read the Information Sheet (see Appendix 2.1) and provided informed consent online via clicking the agree button which stated "I agree to participate in this study before proceeding to the questionnaires" (see Appendix 2.2).

Regarding incentives, all students who completed the online survey were asked (optional) to provide their email address in order to have the chance to be entered into a prize draw to win either an iPad or one of four £50 Amazon vouchers. Psychology students (118 students) were additionally offered participant pool credit equal to the time for survey

completion (30 minutes). The recruitment process took place during the period between February and mid-March 2016.

2.2.3 Procedures

Participants accessed the survey after verifying their identity as Durham Students using their University username and password. After consenting to take part, participants proceeded to the demographic questionnaire which covered various questions such as age, gender, year of study, employment status, and whether or not they had moved away from home (see Appendix 2.5). This was followed by the main survey (SoWise) in which participants were asked to complete 17 questionnaires. Completion took on average 30 minutes. At the end of the survey participants were debriefed and provided with a list of help lines in case any participant thought that the questionnaires had raised any issues that they wanted to seek help for (see appendix 2.3).

2.2.4 Survey and Questionnaires

The survey was presented online using the Qualtrics platform and six questionnaires were used to measure the study variables (childhood adversity, current adversity, social support, depression, academic performance, quality of life). These instruments are detailed below.

1- Childhood adversity

Childhood Experience of Care and Abuse Questionnaire (CECA.Q)

The CECA.Q (Bifulco, Bernazzani, Moran, & Jacobs, 2005) was used to measure the care and abuse experienced by the participant during their childhood (see appendix 2.9). The scale includes several categories, including yes/no questions (n =18) and 5-point Likert scales (n =32). The scoring system is divided among the categories of parental loss, parental care, father and mother antipathy, support, physical abuse and sexual abuse. Items

with Likert scale questions range from 1-5 with 1 referring to “not at all”, 3 referring to “unsure”, and 5 referring to “yes definitely” such as she (referring to mother) made me feel unwanted, he (referring to father) was very difficult to please. Therefore, high scores indicate elevated levels of childhood adversity. Items with yes /no questions are scored to evaluate whether childhood adversity is reported or not. For example, have you ever been separated from your parent for one year or more before age 17?. The self-report questionnaire was developed to mirror the original questionnaire and its statistical reliability and validity (Bifulco, Bernazzani, Moran, & Jacobs, 2005). During the follow-up stage, Bifulco and her colleagues found that the questionnaire was consistent with the interview in showing statistical reliability and validity. The scale showed satisfactory internal scale consistency on CECA for neglect and antipathy (the value of α for antipathy was .81 and that for neglect was .80). Test-retest consistency has been evidenced in both the scales for abuse and care (Bifulco et al., 2005).

2- Current adversity

List of Threatening Experiences Questionnaire (LTEQ) (Brugha, Bebbington, Tennant, & Hurry, 1985; Brugha & Cragg, 1990).

The List of Threatening Experiences (LTE) was an inventory of events of human life that scored in terms of their level of threat to individuals’ mental and physical health such as moderate, no threat, etc. (Brugha et al., 1985). The works of Brugha et al. resulted in the simplification of old inventories which had 60 event categories and trimmed it down to a brief list of 12 major categories of life events (Kume, 2006). The aim of the scale was to measure the occurrence of recent stressful events. LTE-Q comprises 12 items. Participants were required to answer yes/no questions (n=12) to determine whether or not any of the stressful events have been experienced within the past six months. The high overall number of stressful life events reported is referring to elevated levels of adversity,

and the low overall number of stressful life evens reported is referring to low levels of adversity. Brugha and his colleagues cited the following events as examples: serious illness, death of a relative, separation due to marital difficulties unemployment, and major financial crisis (see appendix 2.10 for full details). Overall, this questionnaire has shown high reliability with Kappa range= 0.61~0.87 and is applicable to assess current adversity with range of different types of stressful events (Brugha & Cragg, 1990).

3-Sources of social support

The Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet, Dahlem, Zimet, & Farley, 1988b)

The MSPSS was developed to assess the participants' feeling of social support and how they perceive its quality and levels including family, friends and significant others (Zimet et al., 1988b). The MSPSS consists of three subscales: (a) family, (b) friends, and (c) significant others (see appendix 2.8). It contains 12 items and is measured on a 7-point Likert scale, where 1 is 'very strongly disagree' and 7 is 'very strongly agree'. Examples of MSPSS statements include "There is a special person who is around when I am in need", "There is a special person with whom I can share joys and sorrows", "My family really tries to help me", etc. These statements were presented to the respondent in order to assess how the person feels about the support system that he or she is given. Each subscale (significant others, family and friends) comprises four items. To compute the score for each subscale, the total score for each one is divided by 4. The overall score can also be computed by adding all the scores and dividing it by 12, with high scores meaning elevated levels of social support. This self-report scale was established and initially used by Zimet and his team with a sample of 136 women and 139 men university undergraduates. This same early research also showed that the scale has good internal and test-retest reliability, and its construct validity was considered to be moderate, with internal and test-retest

reliability of .85 for the total score of the scale (Zimet, Powell, Farley, Werkman, & Berkoff, 1990). The overall internal consistency for this scale was found between .80 and .95 (Zimet et al., 1988b). The MSPSS sub-scales have reported high internal consistency including significant other: .91 family: .91, and friends: .89 (Canty-Mitchell & Zimet, 2000).

4- Depression

Patient Health Questionnaire 9 (PHQ-9) (Pfizer, 1999).

PHQ-9 was used to assess depression and its severity, and it comprises nine items based on the DSM-V diagnostic criteria for depressive disorder (see appendix 2.11). (Pfizer, 1999). Examples of items from the PHQ-9 are "experiencing little interest or pleasure of doing things", "feeling down, depressed, or hopeless" and "poor appetite or overeating". The responses are rated on a 4-point scale that indicate severity of symptoms. Rating of the items is done from 0 (not at all) to 3 (nearly every day). The score range for the PHQ-9 is 0-27 with a cut off score of 10 for depression , and scoring was proceeded using the sum of ratings for severity of depression (Pfizer, 1999; Thombs et al., 2014). A low score therefore indicates low levels of depressive symptoms and a high score indicates elevated levels of depressive symptoms. The inclusion criteria was presented by the following groups: no depression (<=9), mild to moderate depression (10-14), and moderately severe to severe depression (15-27). The PHQ-9 has been found to have excellent internal reliability, with a Cronbach's α of 0.89 in the PHQ Primary Care Study and 0.86 in the PHQ Ob-Gyn Study (Kroenke, Spitzer, & Williams, 2001).

5-Academic performance

Academic Performance (Academic Self Efficacy Scale- ASES) (Chemers et al., 2001).

Academic performance was measured using The Academic Self Efficacy Scale

(Chemers et al., 2001). This measure of self-efficacy is used to assess student's self-belief about their academic ability such as assignments, exams, and study tasks (see appendix 2.6). The questionnaire consists of 8 self-report items to assess a student's beliefs on the performance of various academic tasks. Example skills include practical habits such as scheduling of tasks, note taking, test taking, researching and writing papers. The Academic Self Efficacy Scale does not concentrate solely on how someone performs specifically on specialised subjects such as math, science or languages since the goal of the scale was to predict the general academic performance.

The Academic Self Efficacy Scale is scored on a 7-point Likert scale where the values range from 1 as "Not Very Well" to 7 as "Very Well", and high scores are indicative of elevated levels of self-belief in academic performance (Chemers et al., 2001). Statements in this scale include questions such as "I know how to schedule my time to accomplish my academic tasks", "I know how to study to perform well on university tests", and "I am a very good student". The scale was developed for student populations and was shown to be highly reliable with Cronbach alpha scores ranging from 0.81-0.9. (Chemers et al., 2001).

6- Quality of life

WHOQOL-BREF Questionnaire (World Health Organization 1998)

The WHOQOL-BREF was used to determine the level of quality of life in four domains. It has been widely used and is available in different languages. This shorter version of the original instrument comprises a 26 item scale (World Health Organisation, 1998; Zhang et al., 2012). The response options range from 1 (very dissatisfied) to 5 (very satisfied), with higher scores indicative of elevated levels of quality of life. The scale consists of four domains (environmental, physical, psychological, and social relationships). The psychological and social relationships domains were used in this study, five items for

the psychological domain and three items for the social relationships domain (see appendix 2.7). The items are rated ranging from 1 (very dissatisfied) to 5 (very satisfied) with higher scores indicating a good quality of life for psychological and social relationships domains, for example, how satisfied are you with your personal relationships? (World Health Organisation, 1998). Internal consistency for this scale was determined between .81and .95, the WHOQOL-BREF psychological domain has reported a good internal consistency of .79 and for the social relationships of .75 (Rehabilitation Measures Database, 2014).

2.2.5 Ethical considerations

This study was reviewed and approved by the School Ethics Committee, Durham University (Friday, 6th May 2016- Re: ESC2/2016/MSC03) (see appendix 2.12). The ethical issues are discussed in this section.

Ethical issues:

1- Anonymity and confidentiality of the data

This study was based on data from the SoWise survey and approved by Ethics Committee (Ref number: ESC2/2015/17 1st December 2015). Data in this study were treated with a high level of confidentiality as follows:

"Data was collected and stored by Qualtrics. Qualtrics complies with the U.S. and E.U. Safe Harbor Framework and the U.S. and Swiss Safe Harbor Framework as set forth by the U.S. Department of Commerce regarding the collection, use and retention of personal information from European Union member countries and Switzerland. Qualtrics has certified that it adheres to the Safe Harbor Privacy Principles of notice, choice, onward transfer, security, data integrity, access, and enforcement. HITECH (Health Information Technology for Economic and Clinical Health Act) updated HIPAA rules to ensure that

data are properly protected and best security practices followed. Qualtrics safeguards all customer data, and uses secure data centers to ensure the highest protection as per HITECH requirements.

In order to preserve anonymity of personal data the survey was split into two parts. The first survey comprised of the information sheets, initial consent procedure and presentation of the measures. During this first survey participants were allocated a unique code. The purpose of the second survey was to request an email address for the prize draw. At this point participants were sent an anonymous link with an authenticator (participant's unique code). This ensured that the survey results and identifiable data were collected and stored separately. Data was downloaded and stored directly on the University's secure network for the duration of the study and complied with Data protection laws.

2- Potential hazards, burdens and risks for participants:

Based on the nature of a number of questions provided in the online survey, participants might have experienced emotional distress. However, participants were given a chance to use their right to withdraw at any point. In addition, a list of helplines for all participants was provided at the beginning of the survey and at the end to guide them to adequate support if needed.

2.2.6 Description of Data Analysis

Data was analysed using the SPSS software package version 23. The sample was divided into three groups based on their total PHQ-9 scores; no depression (<=9), mild to moderate depression (10-14), and moderately severe to severe depression (15-27) (Pfizer, 1999). The moderately severe and severe groups were combined into one group to have sufficient numbers for group comparisons. With respect to childhood adversity the sample

was divided into two groups (representing the inclusion and exclusion criteria); yes if they reported any type of childhood adversity, and no for not reporting childhood adversity.

In order to have an overview of the differences between the groups one-way ANOVAs were performed to compare the depression groups on each of the outcome variables to determine if there is a significant differences on depression levels between the no depression group with mild to moderate depression and moderately severe to severe depression groups. T-tests were conducted to compare the childhood adversity groups and determine if there is a significant difference between those who reported childhood adversity and those who did not. Chi-square performed as appropriate to examine group differences. Confidence intervals were within 95%. Bivariate correlations to examine the relationship between all variables of interest were performed.

Research hypotheses were examined on the full sample using a hierarchical multiple regression including the predictors of depression, academic performance, and quality of life domains (psychological and social relationships). Four models were performed: the first model included potential predictors of depression, the second model included potential predictors of academic performance, the third model included potential predictors of quality of life in the psychological domain, and the fourth model included potential predictors of quality of life in the social relationships domain. The following demographic variables age, gender, year of study, moved away from home and employment while undertaking studies were included in the first step of all models. Step two included childhood adversity, step three included current adversity, and step four included social support domains (significant others, family, friends). Statistical significance was defined at the 0.05 level in all analyses. Further, analysis approaches used in the present study and throughout this thesis were based on a statistical advice by Dr Adetayo Kasim. Finally part of the data from this study was published in the Journal of

Adolescence and Youth (2019, please see the following link from the American Psychological Association https://psycnet.apa.org/record/2019-03794-001, and another link from the publisher for full access https://www.tandfonline.com/doi/full/10.1080/02673843.2019.1568887.

2.3 Results

2.3.1 Descriptive data

The sample comprised of 461 university students with a mean age of 20.62 years (SD 3.34), and was predominantly women (82%, n=378). The majority of the participants were undergraduate students (93.3%, n=430); most of those students were in study year one or year two (68.3%, n=315), and aged between 18 and 21 years (83.2%, n=384). The majority of students had moved out of their home area to study at university (91.8%, n=423). Finally, the majority of the sample was not employed whilst studying at university (73.1%, n=337). Means and standard deviations of the study variables are presented in Table 2.1.

Table 2.1: Means and standard deviations of study variables

Variables	Mean Scores (*M*)	Standard Deviation (SD)
Depression	7.77	5.65
Social support from family	21.32	5.77
Social support from friends	21.20	5.08
Social support from significant others	21.53	5.80
Current adversity	1.63	1.52
Quality of life (psychological)	19.34	4.69
Quality of life (social relationships)	10.47	2.64
Academic performance	40.78	7.16

2.3.2 Clinical characteristics of the sample

Of the full sample, 33% (N=152) met the inclusion criteria for depressive symptoms. Of those who met the depression inclusion criteria, 20.6% (n=95) students reported symptoms of mild to moderate levels of depression, and 12.4% (n=57) reported symptoms of moderately severe to severe levels of depression (see Table 2.2). There was no significant difference between the groups for gender ($\chi 2$ (2) =1.445, p=.486), year of study ($\chi 2(2)$ =15.412, p=.118), moved away from home ($\chi 2(2)$ =.309, p=.857), employment while undertaking studies ($\chi 2$ (2) =1.377, p=.502), and age (t(150)=.244,p=.808). Within the full sample, women students (M = 21.785, SD =5.78) reported significantly higher levels of social support from significant others (F(1,459)=3.986, p=.046), compared to male students (M = 20.385, SD=5.80).

Overall 37.8% (n=167) of students met the inclusion criteria for childhood adversity by reporting at least one type of childhood adversity, with the majority of these students being women (29.6%, n=137), and aged 18-23 years (33.7%,n=149) (see Table 2.2). The majority of the participants who met the inclusion criteria for childhood adversity were undergraduate students (35.1%, n=155), in year one or year two of studies (25.8%, n=114), and had moved away from home (34.2%, n=151). The majority of those who had reported childhood adversity were not employed while studying (26.0%, n=115) (see Table 2.2). There was no significant difference on any of the demographic variables between students who reported childhood adversity and those who did not $p \leq .040$.

Table 2.2: Clinical Characteristics of the sample based on depression groups and childhood adversity groups.

Variable	No depression (n= 309)	Mild to Moderate depression (n= 95)	Moderately Severe to Severe (n= 57)	No childhood adversity (n= 309)	Childhood adversity reported (n= 137)
Gender（Women)	81.2%	81.1%	87.7%	84.0%	78.4%
Age (years)					
18-19	40.5%	38.9%	33.3%	42.5%	33.6%
20-21	44.7%	41.1%	45.6%	44.3%	43.7%
22-23	8.4%	7.4%	12.3%	7.2%	12.0%
24-51	6.5%	12.6%	8.8%	4.1%	10.8%
Year of study (undergraduate)					
First Year 1	37.5%	34.7%	31.6%	36.4%	35.9%
Second Year 2	33.0%	26.3%	36.8%	31.3%	32.3%
Third Year 3	21.0%	29.5%	22.8%	24.0%	22.8%
Fourth Year 4	1.6%	4.2%	-	1.8%	1.8%
Postgrad	6.8%	5.3. %	7.0%	6.5%	2.5%
Moved away from home					
Yes	91.3%	92.6%	93.0%	92.7%	90.4%
No	8.7%	7.4%	7.0%	7.3%	9.6%
Employed					
Yes	25.9%	31.6%	24.6%	24.4%	31.1%
No	74.1%	68.4%	75.4%	75.6%	68.9%

2.3.3 Comparison of mean scores by depression groups

Social support

Results of the one-way ANOVAs showed significant differences between the three depression groups for all social support subscales: significant others $F_{(2,458)}$=7.456, p=.001, family $F_{(2,458)=}$18.234, p<.000, and friends $F_{(2,458)}$=27.511, p<.000 (see Table 3). A post hoc Tukey HDS test revealed that the no depression group had significantly higher scores than the mild to moderate depression group on all social support subscales (significant others, family, friends) at p=.05. Also, the no depression group had significantly higher scores than the moderately severe to severe depression group in all social support subscales (significant others (Figure2.3), family (Figure2.1), friends (Figure2.2)) $p \leq .024$. There was no significant difference between the mild to moderate depression group and the moderately severe to severe depression group for any of the social support subscales $p \geq .999$ (see Table 2.3).

Figure 2.1: Mean scores comparison for depression groups by social support from family

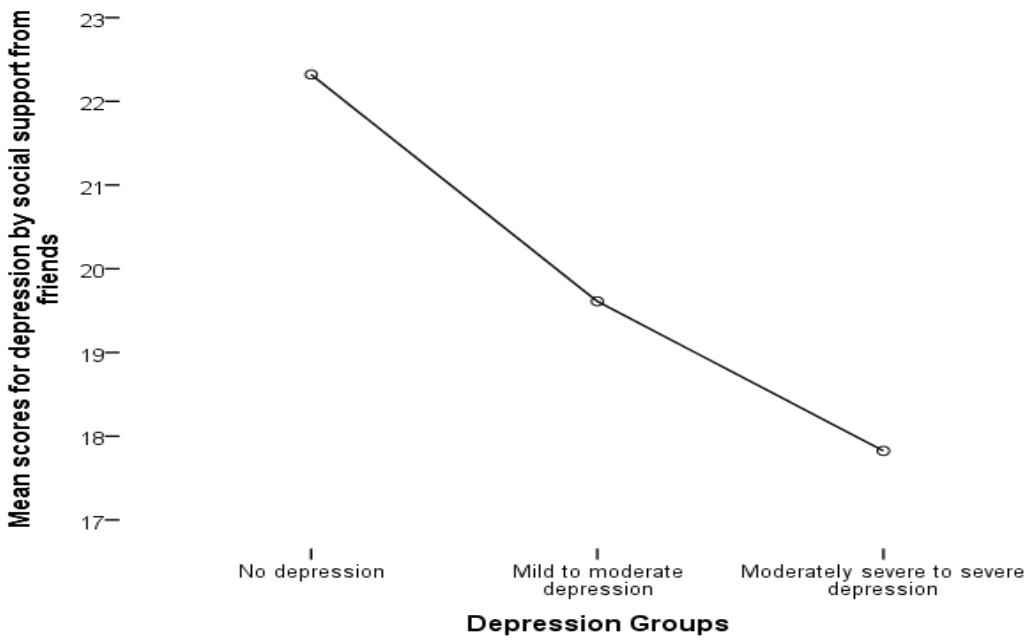

Figure 2.2: Mean scores comparison for depression groups by social support from friends

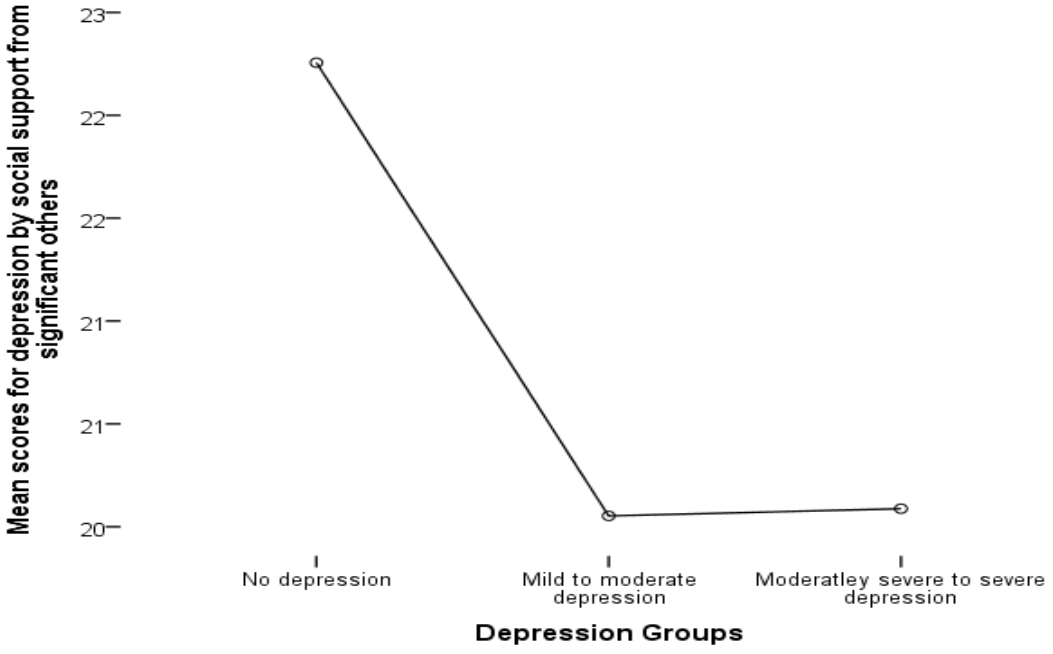

Figure 2.3: Mean scores comparison for depression groups by social support from significant others

Quality of life

Results of the one-way ANOVA revealed significant differences between the three depression groups for the psychological F(2,458)=163.626,p<.000, and social relationships QoL domains F(2,458)=23.429,p<.000. A post hoc Tukey HDS test showed that the no depression group had significantly higher scores than the other two groups in the quality of life domains of psychological (Figure 2.4) and social relationships (Figure 2.5) at p=<.001. Also, the mild to moderate depression group differed significantly from the moderately severe to severe depression group in the quality of life domains of psychological and social relationships at p<=.05 (see Table 2.3).

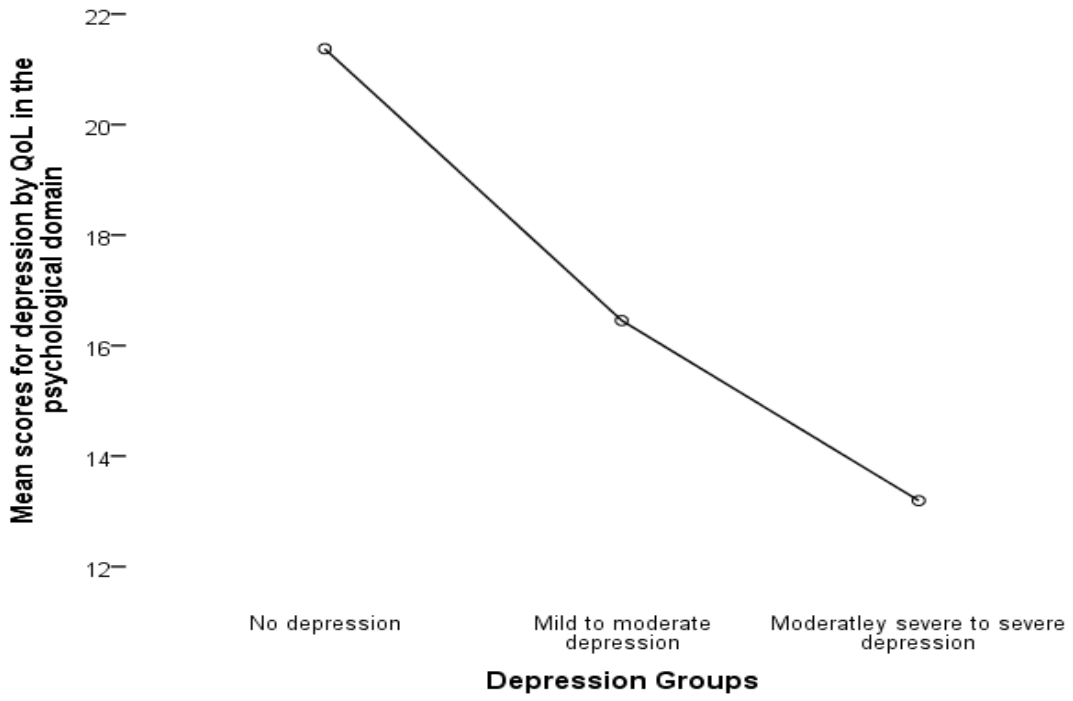

Figure 2.4: Mean scores comparison for depression groups by quality of life in the psychological domain

Figure 2.5: Mean scores comparison for depression groups by quality of life in the social relationships domain

Academic performance

Results of the one-way ANOVA revealed significant differences between the depression groups for academic performance, F(2,458)=163.626, p=.000. A post hoc Tukey HDS test showed that the no depression group had significantly higher academic performance scores than the mild to moderate depression group, and the moderately severe to severe depression group at p=<.001. However, the mild to moderate depression group did not differ significantly from the moderately severe to severe depression group (see Table 2.3, Figure 2.6).

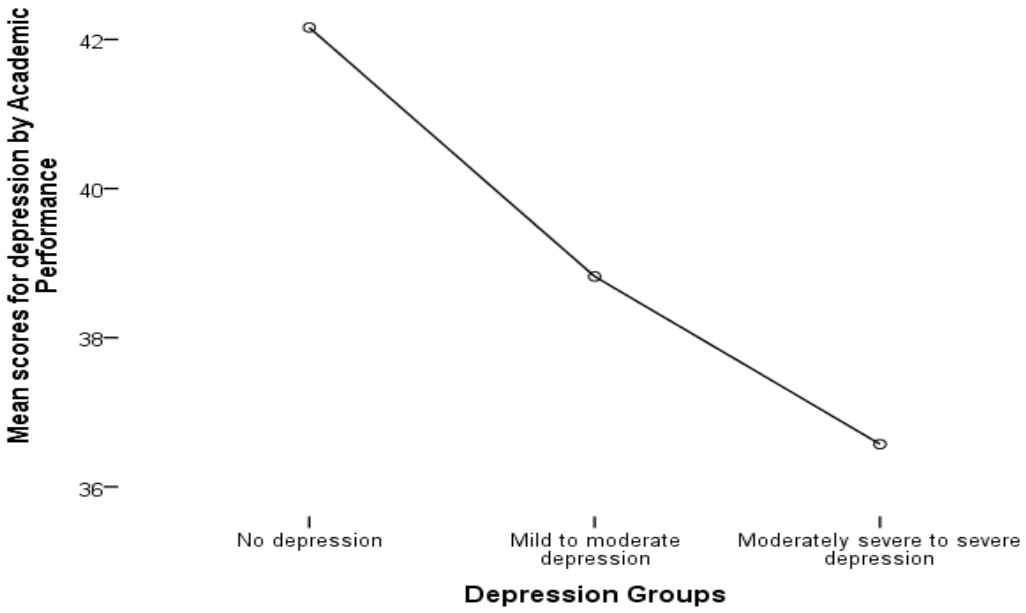

Figure 2.6: Mean scores comparison for depression groups by academic performance

Table 2.3: Mean scores comparison by depression groups.

Variable	No depression group (1)	Mild to Moderate depression group (2)	Moderately Severe to Severe group (3)	P-Value	Comparison Groups	Post Hoc Test
Support (Significant others)	M=22.25 (SD 5.52)	M=20.05 (SD 5.71)	M=20.08 (SD 6.71)	.001*	1 VS 2 1 VS 3 2 VS 3	.003* .024* .999
Friends	M=22.32 (SD 4.73)	M=19.61 (SD 4.58)	M=17.82 (SD 5.58)	.000*	1 VS 2 1 VS 3 2 VS 3	.000* .000* .070
Family	M=22.41 (SD 5.18)	M=19.36 (SD 6.33)	M=18.68 (SD 6.19)	.000*	1 VS 2 1 VS 3 2 VS 3	.000* .000* .744
QoL (Psychological)	M=21.37 (SD 3.60)	M=16.45 (SD 3.50)	M= 13.19 (SD=3.67)	.000*	1 VS 2 1 VS 3 2 VS 3	.000* .000* .000*

(Social relationships)	M=11 (SD 2.49)	M=9.81 (SD 2.40)	M=8.73 (SD 2.86)	.000*	1 VS 2 1 VS 3 2 VS 3	.000* .000* .031*
Academic Performance	M=42.16 (SD 6.32)	M=38.82 (SD 7.53)	M= 36.57 SD=(8.40)	.000*	1 VS 2 1 VS 3 2 VS 3	.000* .000* .125

Significant at 0.01*

2.3.4 Predictors of depression, academic performance and quality of life domains

A bivariate correlation analysis was performed across the sample between the study variables before testing the study hypotheses (see Table 4). Childhood adversity, current adversity and depression had significant negative correlations with all sources of social support (family, friends, significant others), academic performance and the two domains of quality of life (psychological domain social relationships). On the other hand childhood and current adversity had significant positive correlations with depression. Finally, all sources of social support had significant positive correlations with the quality of life domains (psychological domain, social relationships domain) and academic performance (see Table 2.4).

Table 2.4: Correlations of risk and promotive factors, depression, academic performance and quality of life domains.

Variables	1	2	3	4	5	6	7	8	9
1. Childhood adversity	-								
2.Current adversity	.323**	-							
3. Support (Significant others)	-.028	-.102*	-						
4. Support (Family)	-.408**	-.222**	.284**	-					
5. Support (Friends)	-.149**	-.146**	.343**	.366**	-				
6. Depression	.258**	.366**	-.194**	-.343**	-.387**	-			
7. Academic performance	-.166**	-.200**	.151**	.205**	.214**	-.374**	-		
8. Quality of life (Psychological)	-.208**	-.224**	.266**	.401**	.460**	-.734**	.461**	-	
9. Quality of life (social relationships)	-.125**	-.143**	.574**	.304**	.485**	-.350**	.230**	.472**	-

** Significant at the 0.05 level * Significant at the 0.01 level

2.3.5 Hypotheses being tested

Prior to performing the hierarchical multiple regressions, the normality of all datasets was tested. Results from both skewness and kurtosis showed that all values fell within the acceptable range of -1.0 to 1.0. Considering multicollinearity diagnosis, tolerance was found to be greater than .10, and the variance inflation factor was found to be less than 10 suggesting that multicollinearity was not an issue.

2.3.6 Risk and proomtive factors as predictors of depression

Hypothesis 1: It was hypothesised that childhood adversity will be a significant predictor of increased depressive symptoms.

Hypothesis 2: It was hypothesised that current adversity will be a significant predictor of increased depressive symptoms.

Hypothesis 3: It was hypothesised that lack of sources of social support will be a significant predictor of increased depressive symptoms.

Results of the first model (1) that included ChA, CuA, and lack of sources of social support as predictors of increased depressive symptoms (outcome) showed that the model was not significant at the first step $F(5,436)=1.807$, $p=.110$, but was significant at step 2 $F(6,435)=6.510$, $.p=.000$, step 3 $F(7,434)=13.371$, $.p=.000$, and step four $F(10,431)=17.771$, $p=.000$ (see Table 2.5). Gender, year of study and employment while undertaking studies were not significant predictors of depressive symptoms, while age and moved away from home were the only significant predictors of increased depressive symptoms in the first step. In the second step of the model, age was no longer a significant predictor while moved away from home at this step was still a significant predictor of increased depressive symptoms. Furthermore, ChA was a significant predictor of increased

depressive symptoms. The change in R2 at the second step showed that ChA accounted for 6.2% of the variance in depressive symptoms (see Table 2.5). In the third step of the model moved away from home at this step was the only significant predictor of increased depressive symptoms out of the demographic variables. Moreover, CuA was found to be a significant predictor of increased depressive symptoms once added at this step. The change in R2 at the third step showed that current adversity accounted for 9.5% of the variance in depressive symptoms (see Table 5). In the final step of the model, similar to the previous step moved away from home at this step was the only significant predictor of increased depressive symptoms out of the demographic variables. Furthermore, after the addition of the sources of social support in this step, CuA, lack of social support from family and social support from friends were the only significant predictors of increased depressive symptoms. The change in R2 at the final step showed that lack of social support from family and social support from friends accounted for 11.5% of the variance in depressive symptoms (see Table 2.5).

Table 2.5: Risk and promotive factors as predictors of depression (Hierarchical Multiple Regression)

	Depressive Symptoms							
Variable	**Unadjusted R^2**	**Adjusted R^2**	**ΔR^2**	**B**	**SE B**	**βStandardised**	**f^2**	**P-Value**
Model 1 (Step 1)	.020	.009	.016					.110
Gender				.724	.702	.049	.000	.303
Age				.241	.103	.140		.020
Year of study				-.402-	.288	-.079-		.165
Moved away from home				-2.186-	1.059	-.2.065-		.040
Employed				-.544-	.628	-.042-		.387
Step 2	.082	.070	.062					.000
Gender				.984	.681	.067		.150
Age				.166	.101	.096		.101
Year of study				.-.254-	.280	-.050-		.366
Moved away from home				-2.130-	1.026	-.103-		.038

Employed				-.350-	.609	-.027-	.566
Childhood adversity				1.482	.273	.253	.000
Step 3	.177	.164	.095				.000
Gender				.842	.646	.057	.193
Age				.133	.096	.077	.167
Year of study				-.251-	.266	-.050-	.345
Moved away from home				-2.032-	.972	-.098-	.037
Employed				-.432-	.578	-.034-	.455
Childhood adversity				1.742	.546	.149	.002
Current adversity				1.215	.172	.326	.000
Step 4	.292	.276	.115				.000
Gender				1.275	.605	.086	.036
Age				.098	.090	.057	.277
Year of study				-.263-	.248	-.052-	.289
Moved away from home				-1.877-	.912	-.090-	.040

Employed	-.325-	.538	-.025-	.546
Childhood adversity	.785	.547	.067	.152
Current adversity	1.034	.161	.278	.000
Support				
Family	-.151-	.047	-.154-	.002
Friends	-.290-	.051	-.258-	.000
Significant others	-.030-	.043	-.031-	.490

*Significant at the 0.05 level.

2.3.7 Risk and promotive factors as predictors of academic performance

Hypothesis 4: It was hypothesised that childhood adversity will be a significant predictor of low academic performance.

Hypothesis 5: It was hypothesised that current adversity will be a significant predictor of low academic performance.

Hypothesis 6: It was hypothesised that sources of social support will be a significant predictor of better academic performance.

Results of the second model (2) that included ChA, CuA and sources of social support as predictors of academic performance (outcome) showed that the model was not significant at the first step F(5,436)=2.059, p=.069, but was significant at step 2 F(6,435)=3.847, .p=.001, step 3 F(7,434)=5.344, .p=.000, and step four F(10,431)=6.321, .p=.000 (see Table 2.6). Gender, age, moved away from home and employment while undertaking studies were not significant predictors of academic performance, while year of study was

the only significant predictor of academic performance in the first step. In the second step of the model, year of study was still a significant predictor of academic performance. Furthermore, ChA was a significant predictor of low academic performance. The change in R2 at the second step showed that ChA accounted for 2.7% of the variance in academic performance (see Table 2.6). In the third step of the model year of study was the only significant predictor of academic performance from demographic variables. Moreover, CuA was found to be a significant predictor of low academic performance when added at this step. The change in R2 at the third step showed that CuA accounted for 2.9% of the variance in academic performance (see Table 6). In the final step of the model, year of study was the only significant predictor of academic performance out of the demographic variables. Furthermore, after the addition of the sources of social support in this step, CuA and social support from friends were the only significant predictors of academic performance. The change in R2 at the final step showed that social support from friends accounted for 4.9% of the variance in academic performance (see Table 2.6).

Table 2.6: Risk and promotive factors as predictors of academic performance (Hierarchical Multiple Regression)

	Academic Performance							
Variable	**Unadjusted R^2**	**Adjusted R^2**	**ΔR^2**	**B**	**SE B**	**βStandardised**	**f^2**	**P-Value**
Model 2 (Step 1)	.023	.012	.023				0.000	.069
Gender				1.028	.886	.055		.247
Age				-.012-	.130	-.006-		.925
Year of study				.866	.364	.135		.018
Moved away from home				.939	1.338	.036		.483
Employed				-.197-	.793	-.012-		.804
Step 2	.050	.037	.027					.000
Gender				.810	.877	.043		.356
Age				.051	.130	.023		.696
Year of study				.742	.361	.116		.040
Moved away from home				.892	1.320	.034		.500

Employed				-.360-	.785	-.022-	.646
Childhood adversity				-1.244-	.352	-.168-	.000
Step 3	.079	.065	.029				.000
Gender				.909	.865	.049	.294
Age				.074	.128	.034	.569
Year of study				.741	.356	.116	.038
Moved away from home				.824	1.302	.031	.527
Employed				-.303-	.773	-.019-	.696
Childhood adversity				-1.633-	.731	-.110-	.026
Current adversity				-.848-	230	-.180	.000
Step 4	.128	.108	.049				.000
Gender				.512	.849	.027	.547
Age				.118	.126	.054	.350
Year of study				.729	.348	.114	.037
Moved away from home				.521	1.281	.020	.685

Employed	-.413-	.756	-.025-	.585
Childhood adversity	-.974-	.768	-.066-	.205
Current adversity	-.697-	.226	-.148-	.002
Support				
Family	.108	.066	.087	.104
Friends	.202	.072	.142	.005
Significant others	.094	.061	.077	.123

*Significant at the 0.05 level.

2.3.8 Risk and promotive factors as predictors of quality of life in the psychological domain

Hypothesis 7: It was hypothesised that childhood adversity will be a significant predictor of low quality of life in the psychological domain.

Hypothesis 8: It was hypothesised that current adversity will be a significant predictor of low quality of life in the psychological domain.

Hypothesis 9: It was hypothesised that sources of social support will be a significant predictor of better quality of life in the psychological domain.

Results of the third model (3) that included ChA, CuA and sources of social support as predictors of QoL in the psychological domain (outcome) showed that the model was not significant at the first step F(5,436)=1.401, p=.223, but was significant at step 2 F(6,435)=4.875, .p=.000, step 3 F(7,434)=6.132, .p=.000, and step four F(10,431)=19.871,

.p=.000 (see Table 2.7). Gender, age, year of study and employment while undertaking studies were not significant predictors of QoL in the psychological domain, while moved away from home was the only significant predictor of QoL in the psychological domain in the first step. In the second step of the model, moved away from home was no longer a significant predictor of QoL in the psychological domain. Furthermore, ChA was a significant predictor of low QoL in the psychological domain. The change in R2 at the second step showed that ChA accounted for 4.7% of the variance in QoL in the psychological domain (see Table 2.7). In the third step of the model none of demographic variable was a significant predictor of QoL in the psychological domain. Moreover, after the addition of CuA in this step, it was found to be a significant predictor of low QoL in the psychological domain. The change in R2 at the third step showed that CuA accounted for 2.7% of the variance in QoL in the psychological domain (see Table 2.7). In the final step of the model, gender became a significant predictor of QoL in the psychological domain. Furthermore, after the addition of the sources of social support in this step, CuA, social support from family and social support from friends were the only significant predictors of QoL in the psychological domain. The change in R2 at the final step showed that social support from family and social support from friends accounted for 22.6% of the variance in QoL in the psychological domain (see Table 2.7).

Table 2.7: Risk and promotive factors as predictors of quality of life in the psychological domain (Hierarchical Multiple Regression)

	Quality of Life in the psychological domain							
Variable	**Unadjustd R^2**	**Adjustd R^2**	**ΔR^2**	**B**	**SE B**	**BStandardisd**	**f^2**	**P-Value**
Model 1 (Step 1)	.016	.005	.016				0.000	.223
Gender				-.807-	.585	-.066-		.168
Age				-.050-	.086	-.035-		.560
Year of study				-.251-	.240	-.060-		.297
Moved away from home				1.641	.883	.095		.064
Employed				-.111-	.524	-.010-		.832
Step 2	.063	.050	.047					.000
Gender				-.995-	.573	-.081-		.083
Age				.004	.085	.003		.959
Year of study				-.357-	.236	-.085-		.130
Moved away from home				1.600	.862	.093		.064

Employed				-.252-	.512	-.024-	.623
Childhood adversity				-1.075-	.230	-.221-	.000
Step 3	.090	.075	.027				.000
Gender				-.933-	.566	-.076-	.100
Age				.019	.084	.013	.820
Year of study				-.359-	.233	-.085-	.124
Moved away from home				1.557	.851	.090	.068
Employed				-.216-	.506	-.020-	.670
Childhood adversity				-1.607-	.478	-.165-	.001
Current adversity				-.539-	.150	-.174-	.000
Step 4	.316	.300	.226				.000
Gender				-1.459-	.495	-.119-	.003
Age				.067	.074	.047	.360
Year of study				-.358-	.203	-.085-	.078
Moved away from home				1.300	.746	.075	.082

Employed	-.349-	.440	-.033-	.428
Childhood adversity	-.476-	.448	-.049-	.288
Current adversity	-.324-	.132	-.105-	.015
Support				
Family	.190	.039	.232	.000
Friends	.307	.042	.328	.000
Significant others	.068	.035	.084	.056

*Significant at the 0.05 level.

2.3.9 Risk and promotive factors as predictors of quality of life in the social relationships domain

Hypothesis 10: It was hypothesised that childhood adversity will be a significant predictor of low quality of life in the social relationships domain.

Hypothesis 11: It was hypothesised that current adversity will be a significant predictor of low quality of life in the social relationships domain.

Hypothesis 12: It was hypothesised that sources of social support will be a significant predictor of better quality of life in the social relationships domain.

Results of the third model (3) that included ChA, CuA and sources of social support as predictors of QoL in the social relationships domain (outcome) showed that the model was not significant at the first step**,** F(5,436)=1.884, p=.096, but was significant at step 2 F(6,435)=2.424, .p=.026, step 3 F(7,434)=2.782, .p=.008, and step four F(10,431)=31.950,

.p=.000 (see Table 2.8). Gender, year of study, moved away from home and employment while undertaking studies were not significant predictors of QoL in the social relationships domain, while age was the only significant predictor of QoL in the social relationships domain in the first step. In the second step of the model, age was still a significant predictor of QoL in the social relationships domain at this step. Furthermore, ChA was a significant predictor of low QoL in the social relationships domain. The change in R2 at the second step showed that ChA accounted for 1.1% of the variance in QoL in the social relationships domain (see Table 2.8). In the third step of the model age was still at this step the only significant predictor of QoL in the social relationships domain from demographic variables. Moreover, after the addition of CuA in this step, it was found to be a significant predictor of low QoL in the social relationships domain. The change in R2 at the third step showed that CuA accounted for 1.1% of the variance in QoL in the social relationships domain (see Table 2.8). In the final step of the model, none of the demographic variables was a significant predictor of QoL in the social relationships domain out of the demographic variables. Furthermore, after the addition of the sources of social support in this step, CuA, social support from friends and significant others were the only significant predictors of QoL in the social relationships domain. The change in R2 at the final step showed that social support from family and social support from friends accounted for 38.3% of the variance in QoL in the social relationships domain (see Table 2.8).

Table 2.8: Risk and promotive factors as predictors of quality of life in the social relationships domain (Hierarchical Multiple Regression)

	Quality of Life in the Social Relationships Domain							
Variable	**Unadjusted R^2**	**Adjusted R^2**	**ΔR^2**	**B**	**SE B**	**βStandardised**	**f^2**	**P-Value**
Model 4 (Step 1)	.021	.010	.021				.000	.096
Gender				.377	.327	.055		.249
Age				-.126-	.048	-.157-		.009
Year of study				.229	.134	.097		.089
Moved away from home				.791	.493	.082		.109
Employed				.066	.292	.011		.821
Step 2	.032	.019	.011					.025
Gender				.326	.326	.047		.318
Age				-.111-	.048	-.138-		.022
Year of study				.200	.134	.085		.138
Moved away from home				.779	.491	.081		.113

Employed				.028	.292	.005	.924
Childhood adversity				-.293-	.131	-.108-	.025
Step 3	.043	.028	.011				.029
Gender				.348	.325	.051	.285
Age				-.106-	.048	-.132-	.029
Year of study				.199	.134	.084	.137
Moved away from home				.764	.489	.079	.119
Employed				.041	.290	.007	.888
Childhood adversity				-.396-	.274	-.073-	.149
Current adversity				-.189-	.086	-.109-	.029
Step 4	.426	.412	.383				.000
Gender				-.079-	.254	-.011-	.757
Age				-.040-	.038	-.049-	.295
Year of study				.158	.104	.067	.129
Moved away from home				.166	.383	.017	.665

Employed	-.101-	.226	-.017-	.654
Childhood adversity	-.218-	.230	-.040-	.344
Current adversity	-.055-	.068	-.032-	.418
Support				
Family	.017	.020	.036	.405
Friends	.155	.022	.295	.000
Significant others	.206	.018	.455	.000

*Significant at the 0.05 level.

2.4 Discussion

2.4.1 Prevalence of childhood adversity

The present study aimed to identify the impact of childhood adversity, current adversity and sources of social support on depressive symptoms, academic performance, and quality of life. The prevalence of ChA in this sample was 36.2%, which is higher than the prevalence rates found in by Mall's study (27.1%) (Mall et al., 2018) and lower than rates reported by McGavock's findings (56%) (McGavock & Spratt, 2014). This disparity may be due to the number of types of adverse childhood experiences included in these types assessed in the studies, the variety of what can be considered adverse experiences, and the scope of different measures used to assess these adversities, Further explanations might be due to that ChA experienced in the past, thus it is difficult to recall such experiences for some individuals, also not all participants are willing to report severe sensitive adverse experiences specifically sexual abuse which may contribute to variations

on prevalence rates of ChA across different studies (Sable, Danis, Mauzy, & Gallagher, 2006).

2.4.2 Prevalence of depression

The overall prevalence of depression in the sample (33%) is consistent with the average rates reported in a systematic review that revealed the prevalence of depression among university students ranged between 10% and 85% (Ibrahim, Kelly, Adams, & Glazebrook, 2013). The high variation in the literature of prevalence rates among university students is likely due to cultural differences that may induce the vulnerability of depressive symptoms or reducing the risk of this mental health problem such as collectivism and individualism culture, types of instruments used and the sample recruited (Ibrahim et al., 2013). For example, some cultures have a collectivism perspective such as Asia where sources of support such as family are more connected to family members and communities, the connectedness and availability of such sources may help individuals encountering depressive symptoms thus reducing its impact and prevalence. A study of university students conducted in South Korea found that the prevalence of depression was 10.1% (Roh, Jeon, Kim, Han, & Hahm, 2010). On the other hand the west countries rely on individualism perspective where individuals are the centre of this perspective, such culture differences may influence the prevalence rates of depression. For example, a study of university students in the US revealed that the prevalence of depressive symptoms was 59.1% (Thompson, Goebert, & Takeshita, 2010). Moreover, the gender balance in sample recruited in previous studies may increase the incidence of depression rates as women participants are found in the literature to have greater levels of depression, so if the majority of sample recruited was women rates are likely to be higher as will be discussed in detail in chapter 5. A study of 71.7% women participants showed that the prevalence of depressive symptoms was 84.5% (M.D et al., 2008). Another example might be linked to

the economic statue of participants, in this respect some studies were conducted in low income countries such as Africa which may increase and influence the reported rates of depressive symptoms (Othieno, Okoth, Peltzer, Pengpid, & Malla, 2014). For instance, a study conducted in Africa revealed that the prevalence of depressive symptoms was 71% (Ibrahim, 2005).

Moderate to severe depressive symptoms was reported by 8% of the sample. Severe depressive symptoms in the other hand was reported by 3.4% of university students in the current study. The result for severe depressive symptoms is comparable to the 4% to 6% rates reported in previous studies that use different measures (Asante & Andoh-Arthur, 2015; Chen et al., 2013; Othieno et al., 2014).

Unlike previous studies, no significant difference was found in rates of depression between men and women students (Adewuya, Ola, Aloba, Mapayi, & Oginni, 2006). It is possible that the high percentage of women students in this sample (82%) may have confounded the findings by not capturing a comprehensive overview of the impact of social support sources on depression and quality of life domains for men students. However, women students are more likely to respond to and complete surveys than men (Van Mol, 2017) as will be discussed in details in chapter 5.

2.4.3 Predictors of depression, academic performance, and quality of life

2.4.4 Risk factors of depression, academic performance, and quality of life

The present study supports the first hypothesis (that is ChA will be a significant predictor of increased depressive symptoms, low academic performance, and QoL) and found that ChA had a significant positive relationship with and was a significant predictor of increased depressive symptoms. This finding is consistent with studies both in

university students (Mall et al., 2018; Vidourek, 2017; Yan et al., 2009) and other populations (McLaughlin et al., 2012; van Veen et al., 2013). The experience of ChA is documented in the literature to be linked to stress sensitivity as a result of a sensitisation process (Lardinois, Lataster, Mengelers, Van Os, & Myin-Germeys, 2011). One hypothesis for the results from the present study derives from the stress sensitisation hypothesis (Rudolph & Flynn, 2007). This hypothesis proposes that the experience of stressors such as ChA is encoded as memory tracers in the brain, resulting to a sensitised stress response (Rudolph & Flynn, 2007).

Subsequently, certain levels of such experiences are needed to prompt negative mental health outcomes (Rudolph & Flynn, 2007). This assumption is in line with the theory of diathesis-stress that attempts to explain experiencing depressive symptoms as the result of an interaction between a predispositional vulnerability and a stress caused by life experiences (Ingram & Luxton, 2005), suggesting that those who are considered vulnerable will need low levels of stress in order to produce symptoms of mental health problems (Rudolph & Flynn, 2007; Zubin & Spring, 1977). Considerable evidence in the literature endorse this hypothesis as participants with the experience of ChA following lower levels of stress consistently report several mental health problems including depression (Dienes, Hammen, Henry, Cohen, & Daley, 2006; Harkness, Bruce, & Lumley, 2006; Kendler, Kuhn, & Prescott, 2004).

Furthermore, this is a likely finding given that the experience of ChA at early stages of life (specially before age 3 which has been shown to have the most significant impact) induces negative outcomes throughout the lifespan, and emotional abuse and neglect have severe negative consequences on individuals later in life. For example, children may be deprived of love, care and protection and suffer humiliation, criticism, rejection or other overt expressions of dislike towards the child at the hands of family

members or caregivers. These incidents may increase the risk of developing negative thoughts of worthlessness and powerlessness, thus increasing vulnerability to experiencing depressive symptoms later in life.

Attachment theory proposes that attachment characters aid in forming representational models of the relational world (Bowlby, 1983), and therefore, children who have experienced ChA, specifically emotional neglect and abuse, may be prone to forming a negative self-image, leading to vulnerability to internalising disorders such as depression and anxiety (Shapero et al., 2014).These findings show a long-lasting negative impact of adversities therefore indicating a critical need for prevention and intervention strategies targeting early adverse experiences and their mental health consequences.

Findings from this study also revealed that ChA was a significant predictor of, and had a significant negative relationship with poor academic performance. Consistent with the study results, previous studies have revealed comparable findings among university students and young age groups (Borofsky et al., 2013; Coohey et al., 2011; Kaloeti et al., 2018). This might be due to the experience of negative environmental factors and the vulnerability of neurobiological consequences by inducing negative effects on the brain such as impaired cognitive function which may affect abused or neglected individuals' long-term outcomes and students' performance (Repetti, Taylor, & Seeman, 2002), thus inducing poorer academic outcomes. This assumption is supported by the neurobiological model of deprivation and threat which hypothesizes that the effects of deprivation and threat impact negatively on neurodevelopment through the typical developmental processes of neuroplasticity that take place in early ages (Margaret A. Sheridan & McLaughlin, 2016). This model also includes a neurobiological pathway underlying deprivation and threat-related deficits in neurocognitive function which are likely to produce deficits in cognitive functions, such as language and executive functions, that in

turn, will decrease academic performance (Margaret A. Sheridan & McLaughlin, 2016). Previous studies in the literature support this hypothesis as individuals reporting the experience of ChA such as deprivation and threat effects the neural development and cognitive functions that results to lower academic outcomes (McLaughlin, Sheridan, & Lambert, 2014; M. A. Sheridan & McLaughlin, 2014).

Moreover, it is possible that incidences of ChA are symptomatic of various unpleasant aspects of the shared family environment. In this respect, dynamics associated with negative family connections (Patterson, DeBaryshe, & Ramsey, 1989) may result in the child experiencing adversities, which might increase the vulnerability to having difficulties later in life.

Furthermore, the present study results showed that ChA had a significant negative relationship with, and was a significant predictor of, poor quality of life in both the psychological and the social relationship domains. Previous evidence in the literature has consistently reported similar findings among different age groups and populations, including students (Chan, 2013; Corso et al., 2008; Jernbro et al., 2015; Jud et al., 2013; Lanier, Kohl, Raghavan, & Auslander, 2015; Weber et al., 2016). This may be due to experiencing ChA that has an enduring impact on health outcomes and thus increase the likelihood of reporting poor quality of life. A study of 4,467 students found that participants with ChA reported depressive symptoms and, consequently, a poorer quality of life (Al-Fayez, Ohaeri, & Gado, 2012). Moreover, the nature of the university environment, with its various demands and stressors, might lead to such poor quality of life for students.

Similarly, the current findings from this study support the second hypothesis (that is CuA will be a significant predictor of increased depressive symptoms, low academic

performance, and QoL), and revealed that CuA had a significant positive relationship with and was a significant predictor of increased depressive symptoms. Consistent with these findings, previous studies in the literature found comparable results among university students (Andrews & Wilding, 2004; Mae Lynn et al., 2013; Sokratous et al., 2013). This may be explained in part by the cognitive vulnerability model of depression (Beck's theory) that claims a cognitive focus on negative content precedes depressive symptoms, and accordingly, negative information processing shapes a lasting risk for developing depressive symptoms (Beck, 1987). Beck's theory suggests that such cognitive styles stored as mental representations of individuals' self and previous experiences that are shaping characteristics of individuals' cognitive organisation. When an individual is confronted with stressors, such negative cognitive styles are activated and consequently impacts how the stressors are perceived by individuals. For example these styles are normally organised as dysfunctional attitudes such as I am nothing without money and financial support or If I break up with a close relationship then I am a failure as an individual. In this respect the occurrence of negative situations such as financial crises triggers a pattern of negatively cognitive information processing that leads to the onset of depressive symptoms. Thus, when individuals experience CuA and stressors, cognitive vulnerable individuals may be more likely to experience and therefore report depressive symptoms (Beck, 1987). This is also consistent with the diathesis stress model (Eberhart & Hammen, 2010) that posits that depression is produced by the interaction between cognitive vulnerability factors (the diatheses) and certain environmental conditions (the stressors) that trigger such conditions.

Results from this study showed that CuA had a significant negative relationship with and was a significant predictor of poor academic performance. These findings are consistent with previous evidence in the literature among university students (Dusselier et

al., 2005; Dwyer & Cummings, 2001; Misra & McKean, 2000). CuA is thought to be linked to particular aspects of cognitive function performance, indeed negative stressors are related to lower performance of executive function, attention and processing speed (Pukay-Martin, Cristiani, Saveanu, & Bornstein, 2003). This assumption suggests that individuals with current adversity experiences perform worse on such tasks for example lower performance of the executive function that help in reasoning, and planning etc. Although cognitive functioning was not assessed in the present study it may explain the lower academic performance by individuals.

The present study findings also showed that CuA had a significant negative relationship with and was a significant predictor of poor experience in quality of life domains (psychological and social relationships domains). Consistent with these findings, previous studies revealed comparable results (Mohammed & Abdel Kader, 2016; Staniute, Brozaitiene, & Bunevicius, 2013; Villalonga-Olives et al., 2010). This may be due to the quality of social and psychological life being likely influenced by daily stressors and adversity. For example, the break-up of a close relationship, and illness (measured in the current study) may increase the risk of reducing the quality of life both socially and psychologically. Further explanations of the current findings, as discussed earlier, might be due the nature of this developmental stage of emerging adulthood and the particularly high levels of stressors encountered during and after the transition to the university, such as moving away from known social networks, confronting high academic demands at university, financial issues, creating new social connections, and dealing with daily life responsibilities independently. Such adjustment difficulties and challenges are regarded as leaving these students at risk for inducing negative outcomes such as reducing students' quality of life.

2.4.5 Promotive factors of depression, academic performance and quality of life

Social support has a positive impact on mental health, academic performance and quality of life by helping individuals feel linked to and supported by social connections. The perception of being appreciated and surrounded by social networks is significantly linked to reduced symptoms of mental health issues and, thus, acts as a protective factor against depression (Camara & Padilla, 2017; Dafaalla et al., 2016; Kugbey, 2015). This study's findings support the third hypothesis (that is sources of social support will be a significant predictor of better academic performance, and QoL, while lack of such sources will be a significant predictor of increased depressive symptoms), and showed that lack of social support from family and friends had a significant relationship with, and was a significant predictor of increased depressive symptoms. These results are consistent with the literature (Bukhari & Afzal, 2017; Safree & Dzulkifli, 2010). The relational regulation theory (RRT) proposes that the association between social support and mental health is derived from daily conversations and shared activities with different social networks which in turn help individuals regulate their emotions and mental health problems (Lakey & Orehek, 2011; Wethington & Kessler, 1986). Therefore, the relational regulation theory may explain the current findings and suggests that the use of social networks from different sources is important to tackle stressors and improve individuals' mental health.

Consistent with the present results, a study by Kugbey (2015) showed that social support from friends plays a greater role compared to other sources of social support for university students and the lack of this support from friends was found to be a stronger predictor of depression when compared to other sources of social support (Kugbey, 2015). This may be explained in part by the proximity, close relationship and shared experiences of friends at university. Also, the nature of the university environment provides opportunities for students to meet and engage with new people and to create social

connections that may develop into special relationships. Moving away from home was a significant predictor of depression for the current study. Therefore the majority of students move away from their home, and spend more time with their peers compared to family which might explain the important role of friends as a source of social support. (Michael, Bowers, ColleenTerzian, Hunsberger, & Bruce, 2000). This stage of development is a transitional period for university students, from adolescence to early adulthood, during which they form their identities and develop their social characteristics. Such factors are likely to contribute to the important role of social support from friends in dealing with such transitions while at university.

In addition, the results of the present study are consistent with previous evidence in the literature in showing the significant role of family as a source of support in promoting students' wellbeing (Hamdan-Mansour & Dawani, 2008). This effect may be partly due to parents' maturity and depth of experience with life stressors, as the maturity of sources of support is regarded as an important element when seeking a supportive environment (Camara, Bacigalupe, & Padilla, 2017).

Further, social support from significant others such as partners and close relationships has a positive impact on university students' mental health (Kugbey, 2015). However, there are inconsistent results in the literature, where some studies showed that lack of social support from a significant other was a significant predictor of depression in university students (Kugbey, 2015), while other studies did not reveal that depressive symptoms were predicted by a lack of social support from significant others (Hamdan-Mansour & Dawani, 2008; Safree & Dzulkifli, 2010). In the present study, findings showed that lack of social support from significant others did not predict depressive symptoms. The contradictory findings from some previous studies may be due to the use of different instruments, specifically the construction of scales that measured total scores or

wider domains. Moreover, it is also possible that the informal sources of social support from both friends and family may be considered more reliable and trustworthy than other sources. The possible explanation for this is that close relationships such as partners are not stable specially at this young age compared to adults. In this respect, this may reflect the strength and significance of the present study by investigating specific sources within a social support system.

Women students were found to have significantly greater levels of social support from significant others as well as overall social support than men students. Similarly, previous results showed that women students reported more overall social support than did men students (Kugbey, 2015; Tahmasbipoura & Taheri, 2012). This may be due in part to the more frequent help-seeking behaviour reported by women than men, and the greater value placed on relationships by women (Hamdan-Mansour & Dawani, 2008; Tahmasbipoura & Taheri, 2012). Moreover, it is thought that women are more likely to make use of sources of social and emotional support as a strategy for dealing with relationship problems and other adversities (Camara & Padilla, 2017; Rose & Rudolph, 2006).

This study's findings, also revealed that social support from friends and family had a significant positive relationship with and was a significant predictor of better academic performance. These findings are consistent with previous studies in the literature (Ahmed et al., 2010; Walker & Satterwhite, 2002). This may be due to the improvement in academic outcomes being closely related to the development of social aspects (Konishi, Hymel, Zumbo, & Zhen, 2010). Moreover, because the academic environment has consistently been shown to be a source of significant stress (Liporace, Contini de González, Ongarato, Saavedra, & de la Iglesia, 2009; Shokri, Farhani, Kormi, & Moridi, 2013; Wrzesniewski & Chylinska, 2007), the perception and use of different sources of

social support are regarded as crucial elements for reducing the burden of stress in academic settings. Further, such sources of support function as positive aspects that enhance academic outcomes and eliminate some negative consequences of stressors (Mackinnon, 2012).

On the other hand, in the present study social support from significant others was not found to be a significant predictor of better academic performance, contradicting with some studies in the literature (Rosenfeld et al., 2000).The maturity (rich experiences) of the participants may lead to such contradicting findings as university students are not stable in close relationships with partners for example compared to older age groups (Rauer, Pettit, Lansford, Bates, & Dodge, 2013). The quality of such relationships might also interpret the contradiction for example these days in the age of technology less daily conversation and listening between partners are occurred which in turn will lead to poorer quality of social support and relationships. Moreover, taking into account that most students move away from home to study at university, there is a probability that a number of students left their partners during the period of study, being away from your partner may influence such support and relationships negatively which might explain the contradiction of the findings in the literature for social support from significant others.

Finally, the present findings showed that social support from family and friends were significant predictors of better quality of life in the psychological domain, and social support was also shown to have a significant positive relationship with quality of life. These results are consistent with a previous study that revealed the significant positive influence of social support on quality of life for university students (Dafaalla et al., 2016).

Social support have been shown to be significant predictor of better quality of life in the social relationships domain (Dafaalla et al., 2016). The present study's results

revealed that social support from friends and significant others were the strongest predictors of better quality of life in the social relationships domain. The findings that support from family was more important in the psychological domain of quality of life than in the social relationships domain might be due in part to the seeking of emotional support from family in critical times, thus increasing the quality of psychological wellbeing. Similarly, the findings of social support from significant others being more influential in the social relationships domain than in the psychological domain might be explained by the need to build social networks and find attachment in the university and the wider local community, and thus, such engagements enhance the quality of social relationships.

The social relationships domain of quality of life had a positive relationship with all sources of social support (family, friends, significant others) and is likely to be influenced by scales assessing both social interactions and the quality of such relationships as they both include aspects of relationships that are within the scope of social support system, therefore assessing variables that are linked back to one scope may endorse such associations. The elevated stress and pressure on university students to perform well in academic aspects and to identify their future path in life may explain the lower levels of quality of life for some students. The present study's findings revealed a significant positive relationship between social support and quality of life in the psychological and social relationships domains. This is likely to be explained by stable social networks increasing the quality of mental health wellbeing.

2.4.6 Strengths, and implications

The present study recruited a large sample of 461 university students who participated in an online survey consisting of self-report measures. The results provide evidence about the impacts of childhood adversity, current adversity and specific sources

of social support on depressive symptoms, academic performance, and quality of life among university students. When examining the risks and protective factors with regard to for example depression among university students, this study's inclusion of multiple factors provided a novel vital comprehensive picture of such experiences that many previous studies have failed to capture. In light of the present findings, it is important to develop early prevention programmes in year one of university to help students deal with current adversities and stressors, especially those during the transition, such as moving away from home. Implementing and creating programmes that include friends and family groups would be beneficial as well given that this study shows a significant positive role of these sources of support for students' mental health, academic performance and quality of life. The implementation of such support programmes and the integration in the curriculum of awareness courses about the critical transitional periods in the first year of university would be beneficial for students and may improve student understanding of the support and skills needed to manage such transitions.

Further, focusing on early screening for depressive symptoms is crucial as it can increase the engagement with and benefits from making use of university mental health services. Regular follow-up with students as needed could promote adjustment to university at an early stage. Examples of early prevention programmes are email-based screening (Garlow et al., 2008) and web-based interventions (Haas et al., 2008; Moutier et al., 2012; Sole, Stuart, & Deichen, 2006). These programmes are valuable for identifying depressive symptoms at an early stage thus improving the effectiveness of interventions. Integration of these strategies as a systematic approach would provide more positive outcomes. Moreover, in line with these strategies, universities should consider additional efforts to improve student engagement on campus and increase the awareness of available social support sources, such as support from family and friends, in addition to university

mental health services. The implementation of regular campaigns about student mental health to promote help-seeking would be beneficial for students' wellbeing.

2.4.7 Limitations and future research

This study has several limitations. First, the reliance on self-report measures in this study did not allow for detection of changes or development for both types of adversities, especially those experienced in childhood, although the recall of ChA is showing by some evidence as reliable, in some cases they are difficult to recall (Maughan & Rutter, 1997). The examination of sources of social support over time could have been examined by implementing a longitudinal design to determine patterns and changes of support. Second, the majority of this study's sample population was women; however, this may be explained by the finding that women students are more likely to respond and complete online surveys than men (Van Mol, 2017). Further, this might be also in part reflective of the population of the department of psychology where the majority of students are women. In this study, a significant percentage of the participants who completed the online survey were from the department of psychology (half of the sample). The majority of participants being from one department may also influence the overall presentation of participating schools and departments across the university. However, this may be due in part to the survey being advertised by psychology students, and course credits were offered by only the department of psychology. This is likely to increase participation from that particular group of students, and may influence the generalisation of the results of this study to other schools and departments, as well as hinder the findings of any gender differences within the sample. Future research should target both men and women students and other departments equally during recruitment to get a better representation across the university, and further it could focus on severe symptoms of mental disorders, such as depressive disorder, psychosis and dissociative disorder, to gain deeper insights that will aid in improving

student mental health services at universities, as such severe symptoms are limited in this population.

Moreover, although sources of social support have shown a significant influence over the wellbeing and resilience of university students, some researchers such as DeRosier, Frank, Schwartz, and Leary (2013) propose that social support itself is not enough to reach maximum wellbeing. Therefore, implementing and designing mental health services, interventions and prevention programmes should be part of more comprehensive programmes. In light of this, examining multidimensional factors that promote students' mental health and adjustment would be beneficial for enhancing student wellbeing through university mental health services. This could be achieved for future research by implementing a theoretical framework based on resiliency theory representing different promotive factors including sources of social support.

2.4.8 Conclusion

Childhood adversity and current adverse experiences are linked to depressive symptoms, poor academic performance and low quality of life, while sources of social support are associated with better mental health, academic performance, and quality of life. Focusing on early screening for depressive symptoms in addition to implementing programmes that include sources of social support such as friends and family would be valuable for student mental health. Future work could build on the present findings by focusing on severe symptoms of mental disorders such as dissociative disorder as such severe symptoms are limited in this population. Further it could focus on multidimensional factors that foster student mental health and wellbeing by the use of resiliency theory.

CHAPTER THREE

Study 2: The influence of dissociation on wellbeing and academic performance in university students

3.1 Introduction

3.1.1 Summary of Study 1 results and short introduction

Results from Chapter 2 showed that adverse experiences (childhood adversity, current adversity) were significant predictors of depressive symptoms, lower academic performance and poorer quality of life domains (psychological, social relationships). Social support from family and social support from friends were significant predictors of depressive symptoms, academic performance and quality of life in the psychological domain, while social support from significant others and friends were the only significant predictors of quality of life in the social relationships domain. It was found that 33% of university students met the inclusion criteria for depressive symptoms and 37% reported ChA. In other studies, the experience of adversity and depression has been shown to be associated with increased risk for dissociation (Soukup, Papežová, Kuběna, & Mikolajová, 2010). However, although considerable evidence in the literature suggests that dissociative disorder is linked to adverse experiences (Dalenberg et al., 2012) and depressive disorder (Molina-Serrano, Linotte, Amat, Souery, & Barreto, 2008), this evidence comes mostly from clinical and general populations with a particular focus on childhood adversity. Further, the majority of evidence in the literature from studies of dissociative disorder has focused on mental health outcomes and with little attention for the academic outcomes of university students. Therefore, it is important to take a more holistic view of these associations to better understand the mental health and academic experiences of university students and thus inform preventive and intervention programs for such severe disorders. The present study therefore aimed to examine the relationship between dissociative

disorder and three key variables of current adversity, depressive disorder, and academic performance.

3.1.2 Definition of dissociation

The concept of dissociation is used in psychology to refer to a detachment from reality (Onno Van der Hart & Barbara Friedman, 1989; Schauer & Elbert, 2010).The term 'dissociation' was first introduced in psychology by Janet in 1889, who defined it as "the process where particular mental functions that are ordinarily integrated with other functions presumably operate in a more automatic or compartmentalised manner that is normally outside the memory recall or conscious awareness sphere" (Howell & Itzkowitz, 2016; Onno Van der Hart & Barbara Friedman, 1989). Even though the dissociation concept had been in existence before 1889, Janet's dissociation theory was the first to demonstrate how direct psychological defence operates against overwhelming traumatic experiences in a systematic and clear manner. Particularly, Janet established that humans could have different perceptions of reality that can be distorted due to psychological processes. In his various studies of trauma involving patients with hypnosis, Janet successfully demonstrated the role of dissociative phenomena in eliciting post-traumatic stress responses. He argued that "trauma structures the mind", and based on his findings, reached the conclusion that dissociation is closely associated with hysteria (Howell & Itzkowitz, 2016; Onno Van der Hart & Barbara Friedman, 1989). However, barely three years after Janet's development of his dissociation theory, Freud published results of his psychoanalytic case study that were in contrast with some of Janet's earlier findings. In his study, Freud defined dissociation as "a splitting of the consciousness" (Howell & Itzkowitz, 2016; Onno Van der Hart & Barbara Friedman, 1989). While both scholars viewed dissociation as a fragmentation of the mind, Janet viewed it as a 'version of the self', unlike Freud who saw it as 'disowned parts of the self'(Howell & Itzkowitz, 2016; Onno

Van der Hart & Barbara Friedman, 1989). However, Freud discontinued his research on dissociative theory in 1896 while Janet carried on with his studies on the dissociative theory until his death in 1947. As a result, Janet's conceptualisation of dissociation became more widely used in psychology, and has been used in various fields such as hypnotherapy where it is applied as a clinical and effective intervention for patients with other complications such as irritable bowel syndrome depression and skin problems (Nicholas Talley, 2002).

Over the years, there have been new and detailed definitions proposed for the concept of dissociation. For instance, while describing dissociation with reference to childhood experiences, Ross, Anderson, Fleisher, and Norton (1991) defined dissociation as a strategy for the body to cope with childhood trauma, or rather, an adaptive psychological defensive mechanism that helps the victims to deal with childhood emotions and feelings. Similarly, dissociation has been defined as an outcome of the disruption in the normal coordination between a person's behaviour, feelings, thoughts and memory, which is often facilitated by periods of adversity (Briere, 1992). The American Psychiatric Association describes dissociation as a process associated with distortions of time, lack of continuous consciousness, disorientation from reality and losing a sense of personality (Hart, Nijenhuis, & Steele, 2005). In a more recent study, Nijenhuis and van der Hart (2011) focused on four subsystems associated with adversity, namely; somatoform, psycho form, positive and negative subsystems. The first two subsystems deal with a loss of motor control and amnesia respectively. The positive subsystem is associated with memory flashes, while the negative one is mainly associated with paralysis and loss of memory (Nijenhuis & van der Hart, 2011).These definitions agree that memory loss is a key feature of the condition and that dissociation is a response to adversity. In line with this, the operational definition of dissociation for this study will be one of the most commonly used

for known clinical examples and general populations, which was provided by Carlson et al. (1993), where dissociation is defined as referring to severe symptoms of the lack of integration of feelings, experiences and thoughts into the drift of consciousness.

3.1.3 The relationship between dissociation and adversity

Dissociative disorder is a profound risk factor for negative health outcomes and it has been shown to be linked with severe forms of adversity including childhood and current experiences (Dalenberg & Palesh, 2004; Rafiq, Campodonico, & Varese, 2018). Indeed, individuals with greater levels of frequent dissociative symptoms are more likely to report adverse experiences and are more vulnerable to the negative health impacts that occur as a result (Phinney & Haas, 2003). Elevated levels of dissociative symptoms as a reaction to adverse experiences is thought to occur as a defence mechanism in an attempt to change unwanted realities and individuals can develop extreme dissociative capacities with such experiences (Herman, 1992; Soukup et al., 2010). Given the proposed connection between dissociation and childhood adversity, research has demonstrated that dissociative disorder is associated with the history of adverse experiences. In this respect, individuals with ChA experiences such as neglect and abuse are more likely to report dissociative symptoms (Carrion & Steiner, 2000; Barbara Sanders & Marina Giolas, 1991).

Severe symptoms, such as detached feelings, develop after extremely adverse events and can impact the person's ability to function. Empirical studies have also been undertaken to investigate dissociation among different populations and have consistently shown a significant positive relationship between dissociative symptoms and adverse experiences, including sexual and physical abuse as well as neglect (Dalenberg et al., 2012; Gary Peterson, 1991; Ross et al., 1991; Sanders & Giolas, 1991). Some studies, such as the one conducted by Chu and Dill (1990), have identified connections to specific forms of abuse, such as sexual abuse, and their findings showed that participants who experienced

sexual abuse by a family member demonstrated significantly elevated dissociative symptoms. Chu and Dill (1990) study found a significant negative impact of sexual and physical abuse on dissociative episodes, and those who reported experiencing both sexual and physical abuse had higher levels of dissociative symptoms than those who reported only one type of adverse experience (Chu & Dill, 1990). This suggests that experiencing different types of abuse is cumulative and linked to more frequent and severe dissociative symptoms.

Among university students, a number of studies have linked dissociation to childhood adversity (Dalenberg & Palesh, 2004; Martinez-Taboas & Bernal, 2000; Ray & Lukens, 1995; Sandberg & Lynn, 1992). For instance, findings from a study conducted with a nonclinical sample of Puerto Rican university students showed that participants with psychological malaise (defined by the study as a mental illness that is manifested in the form of uneasiness, social isolation/disengagement and negative feelings) who scored higher for dissociative symptoms on the Dissociative Experiences Scale (DES) had a history of severe adverse childhood experiences (Martinez-Taboas & Bernal, 2000). Furthermore, the study concluded that participants suffering from dissociative disorders used them as a defence against severe adverse childhood experiences. This mechanism that induces disruption between individuals and reality in memory, feelings and thoughts, is an escape from memories of adversities (unconsciously). Formative work in the literature proposed dissociation from consciousness as a central defence against overwhelming situations. In this case, dissociation provides a critical psychological escape from emotional problems linked with overwhelming experiences including ChA where no actual physical escape is possible (Howell & Itzkowitz, 2016; Onno Van der Hart & Barbara Friedman, 1989).

Although evidence has shown the crucial role of dissociative symptoms as a defence mechanism against adverse experiences and revealed its significant positive link to such experiences, there are still gaps in the literature. First, the focus in previous studies was extensively on general and clinical populations with limited attention to the university population. Second, the existing studies among students have not examined severe forms of dissociative symptoms, which may result in a limited understanding of the influence of such symptoms. Third, the majority of studies investigated the link between dissociative disorder and childhood adversity with less attention given to current adversity. Thus, it is important to explore the link between such variables among university students to gain a deeper understanding of severe forms of dissociative symptoms and thus inform preventive and interventions programmes for students with this disorder.

3.1.4 The relationship between dissociation and depressive disorder

Individuals with increased levels of dissociative symptoms tend to have additional mental health issues (Maaranen, Tanskanen, Haatainen, et al., 2005; Rafiq et al., 2018). In this respect, they are more likely to report depressive symptoms if they also have severe dissociative symptoms, thus affecting health and wellbeing (Maaranen, Tanskanen, Haatainen, et al., 2005). Research evidence has shown that dissociative symptoms are linked to various psychological problems and that those who experience substantial levels of dissociative symptoms have more severe psychological disorders, including depression, in the general population (Levin & Spei, 2004; Maaranen, Tanskanen, Haatainen, et al., 2005; Maaranen, Tanskanen, Honkalampi, et al., 2005), clinical population (Coons, Bowman, Kluft, & Milstein, 1991; Coons, Bowman, & Milstein, 1988; Martinez, 1991; Ross, Joshi, & Currie, 1990; Tutkun et al., 1998) and adolescent and student population (Kadak, Nasiroglu, Boysan, & Aydin, 2013; Singer, Anglin, Song, & Lunghofer, 1995). For example, a study of a clinical sample found a significant positive relationship between

dissociative symptoms and depression. Further, the study divided the participants into two groups, those with high mean scores on the DES and those with low mean scores. The results showed that 15% of participants had high mean scores (cut-off score = 25), and 100% of those participants met the criteria for dissociative disorder. These participants also had significantly higher rates of major depression, and they reported significantly higher rates of adverse childhood experiences when compared to the other group.

A study of secondary school students revealed a significant positive relationship between dissociative symptoms and depression, with participants reporting elevated levels of such symptoms and adversities in childhood (Singer et al., 1995). Although studies of adolescents and students have revealed a significant relationship between dissociative symptoms and depression, most of the focus has been on those with a history of childhood adversity. Meanwhile, CuA or stressors that might be influenced by such experiences, especially among this age group, have not been examined. Further, most of these studies focused on mental health issues and none considered functional measures such as academic performance. The lack of data on these variables could hinder our comprehensive understanding of such experiences for student populations.

While studies of both general and clinical populations revealed a significant positive association between dissociative symptoms and depression, these studies did not consider current adversity. Further, some of these studies did not consider severe dissociative or depressive symptoms.

3.1.5 The relationship between dissociation and academic performance

Dissociative disorder is considered a risk factor for reduced cognitive function, which in turn may induce negative outcomes for academic performance (Roca, Hart, Kimbrell, & Freeman, 2006). Symptoms of severe dissociative disorder, such as detachment from reality, make it more challenging for students to engage in learning

activities and perform well at academic tasks (Perzow et al., 2013). Research has revealed that dissociative symptoms are linked to poorer academic outcomes and that adolescent students with elevated levels of dissociative symptoms are at risk of facing difficulties in the educational setting (Flisher et al., 1997; Hobbs & Coons, 1994). However, a review of existing conceptual and empirical evidence on the impact of dissociation on academic functioning for the university population showed that this area is under-researched, with only a few published studies on the topic.

A cross-sectional study with a sample of university students revealed that students with dissociative symptoms had poorer academic functioning compared to those without any dissociative symptoms (Perzow et al., 2013), suggesting the negative influence of dissociative symptoms on student functioning and performance in academic tasks. Thus, the morbidity caused by dissociative symptoms in students may lead to poorer academic outcomes. Although this evidence revealed that dissociative symptoms are linked to poor academic outcomes, it did not consider the potential impact of adversity, specifically CuA likely to occur with such experiences. A further limitation is that the severity of depressive symptoms was not examined, which may hinder the explanations of such severe disorders and the design of appropriate interventions for students. Thus, the present study will address this gap by examining the link between dissociative disorder and multiple outcomes to gain a comprehensive understanding of these severe mental health disorders for university students.

3.1.6 Summary and rationale

Dissociative disorder has been consistently shown to be associated with adversity (Brunner, Parzer, Sculd, & Resch, 2000; Dalenberg et al., 2012; Dalenberg & Palesh, 2004; Gary Peterson, 1991; Martinez-Taboas & Bernal, 2000; Ross et al., 1991; Sanders & Giolas, 1991; Vonderlin et al., 2018; Watson, Chilton, Fairchild, & Whewell, 2006),

depressive symptoms (Bersani et al., 2014; Kadak et al., 2013; Levin & Spei, 2004; Maaranen, Tanskanen, Haatainen, et al., 2005; Maaranen, Tanskanen, Honkalampi, et al., 2005; Parlar, Frewen, Oremus, Lanius, & McKinnon, 2016; Putnam et al., 1996; Saxe et al., 1993; Singer et al., 1995), and poor academic outcomes (Dell & Eisenhower, 1990; Flisher et al., 1997; Hobbs & Coons, 1994; Perzow et al., 2013). However, in spite of the evidence discussed in this introduction, there are still a number of gaps in the literature in relation to the wellbeing of university students. First, the majority of studies of dissociative and depressive disorders in the literature have focused on clinical and general populations, leaving a lack of attention on university student populations, who are at a transitional developmental stage where numerous mental health problems emerge. Therefore, it is important to conduct further examinations of such severe symptoms among this population to better understand the impact. Second, the majority of evidence in the literature from studies of dissociative and depressive disorders have focused on childhood adversity, in this respect current adversity that might have a significant association with such severe mental health disorders did not receive much attention. Therefore, it is important to take a more holistic view of adversity to better understand the impact that it has on students' well-being and academic performance. It is crucial that a more holistic view of this association is adopted in future research to better understand the student experience at university both mentally and academically. In line with this aim, the present study addressed these issues to bridge this knowledge gap by examining the relationship between dissociative disorder and the three key variables of current adversity, depressive disorder and academic performance among university students.

3.1.7 Aims and hypotheses

1. The aim was to examine the relationship between dissociative disorder and current adversity in university students with the hypothesis being there is a significant positive relationship between them.

2. The aim was to examine the relationship between dissociative disorder and depressive disorder with the hypothesis being there is a significant positive relationship between them.

3. The aim was to examine the relationship between dissociative disorder and academic performance with the hypothesis being there is a significant negative relationship between them.

3.2 Methods:

3.2.1 Research Design

This cross-sectional study used self-report questionnaires and a structured clinical interview to gather the data needed to address the study objectives. This current study aimed to examine the relationship between dissociation and factors associated with the emotional wellbeing of students. Therefore, this present study examined the relationship between the study variables (dissociation, depression, current adversity, academic performance) within university students population. The use of quantitative research has been shown as applicable to these aims, which is in determining relationships (Hopkins, 2000). Researchers prefer non-experimental designs when no treatment is involved and when the primary purpose is to examine relationships. Keele cites the use of correlational studies as applicable to investigate the strengths and direction of the observed relationships (Keele, 2012). Therefore, this type of method was selected given that the study did not aim

to observe the development of the relationship, and this type is most appropriate to achieve the study objectives and answer its questions.

To summarise, the present study used quantitative methods and thus utilised quantitative results. The sample was a subsample of Study 1 and thus utilised date from the online survey of Study 1 (chapter 2) as well as data collected in Study 2 itself.

3.2.2 Participants

The sample for the study was drawn from Study 1 (chapter 2). The sample selection criteria for this study was applied based on reported depressive symptoms and a history of childhood adversity in Study 1. Inclusion criteria for the study were: (i) consented to be contacted in the future for further studies; (ii) scored 10 or above on the PHQ-9 scale; (iii) reported a history of childhood adversity. Participants meeting the inclusion criteria were invited via email to take part in Study 2. The initially targeted sample size was 60 students based on power calculation and an expert statistician's consultation. However, only 57 participants met the inclusion criteria, and only 50 participants responded and completed this study.

Participants were all university students aged 18 years and older. Of the 50 participants, 41 were women and 9 men. The mean age was 20.96 years. All participants provided informed consent (see appendix 3.2).

3.2.3 Procedure:

Eligible participants were emailed an invitation by the researcher to take part in the study (see Appendix 3.5). The information sheet was sent along with the recruitment email so that they had time to consider whether or not to take part (see Appendix 3.1). The researcher then waited until receiving participants' responses via email, telephone or text

messages to arrange interviews either face to face or by telephone (Optional). Interviews were recorded via a Durham University approved digital recorder that was used according to the university policy. Interviews took place at Queens Campus, and those who were based at Durham Campus were provided with the options of travelling to Queens Campus or having telephone interviews. The recruitment process was performed during May and June 2016.

In the case of face to face interviews, the researcher provided participants with the study information sheet (including information about their right to withdraw at any point) which they were given time to read and the opportunity to ask questions. Then, the researcher provided a consent form for participants to sign (see appendix 3.2). For telephone interviews, the researcher read the study information sheet for participants and was available to answer any questions. Then, participants provided a verbally recorded consent via telephone, and they were also asked to sign a written consent form when they met with the researcher to collect the £10 reimbursement.

After participants had given their consent, the interview commenced. In the first part; the researcher gave participants the Dissociative Experiences Scale-II, a self-report questionnaire that on average took around 10 minutes to complete (see Appendix 3.9).

In the second part, a diagnostic interview to diagnose depression was carried out using the Structured Clinical Interview (SCID-5-RV) (see Appendix 3.10) with a maximum of 30 minutes to complete. In the beginning, the researcher provided brief information about it and that only the depression section of the SCID would be used. The interview then started with questions about depressive symptoms. Each participant was offered a compensation of £10 in cash immediately upon completion of the interviews for their time

and contribution. These interviews lasted for a maximum of 40 minutes for both sections (DES-II and SCID) and were completed in one session.

In addition, upon completion of data collection, 10 percent of recorded interviews were randomly selected and independently rated by an expert to determine inter-rater-reliability on the Structured Clinical Interview-SCID-5-RV. The researcher then met with the expert and compared ratings. There was 100% agreement between the researcher's and the expert's ratings.

3.2.6 Survey and Questionnaires

The survey was presented online using the Qualtrics platform and, five instruments were used to examine the relationship between dissociation and the three variables of current adversity, academic performance and depressive disorder. Some of the data was collected as part of Study 1 (Chapter 2); the variables academic performance and current adversity as measured using the ASES and LTEQ respectively. Please refer to chapter 2 page 50-52 for more details about these measures (see appendix 2.6 &2.10). Data on two additional variables (dissociative disorder, depressive disorder) were collected via questionnaire and a structured clinical interview in the present study. These instruments are discussed in this section.

Demographic Variables

For more details about the demographic variables please refer to chapter 2 page 46. (see Appendix 3.5).

1- Dissociative Experiences Scale-II

The Dissociative Experiences Scale-II is a self-report measure to ascertain the lifetime frequency of dissociative experiences (Carlson et al., 1993). The total number of items of

the scale is 28 (see Appendix 3.9). Measurement is on a10 point likert scale ranging from 0 ‘never happens’ to 10 ‘always happening’. It was used to identify the presence and frequency of dissociative symptoms. For instance, “some people have no memory of some important events in their lives” (for example, a wedding or graduation). Participants were asked to circle the number to show what percentage of the time this happens to them, options varied from 0% to 100%. The scoring criteria was by calculating the score of each item and then dividing the total score on 28 with a cut-off score for diagnosis of 30. Test-retest reliability for this measure is reported to be high at .84 (Carlson et al., 1993). Carlson and other researchers developed the Dissociative Experiences Scale (DES), which they defined as a short, self-reporting tool for measuring the frequency of dissociative experiences in a reliable, convenient, and valid manner. To test its validity, Carlson et al. (1993) relied on a sample of 1,051 adults from different geographical locations in carrying out the pilot tests, and the findings showed that the DES was a qualified tool for use on clinical population with mental disorders because it accurately classified subjects into categories of those with mental disorders, and those without.

2- The Structured Clinical Interview (SCID)

. The Structured Clinical Interview (SCID-5-RV) is used to determine diagnosis of mental health disorders. For this current research, Module A (Mood Disorders) of the Structured Clinical Interview (SCID-5-RV) was implemented to assess depressive disorder based on the DSM-5 diagnostic criteria (see Appendix 3.10). The SCID was developed based on the diagnostic criteria of the DSM-III (Spitzer, Williams, Gibbon, & First, 1992). The SCID provides a structured set of questions to understand and clarify differential diagnosis, and evaluate whether the description of a symptom offered by the participant aligns with the diagnostic criteria (American Psychiatric Association, 2016).

The interview type used in this study was based on the Research Version of the SCID. The American Psychiatric Association (2016) claims that this version is the most comprehensive of the SCID-5, containing more disorders than the Clinical Version and includes all of the relevant subtypes, severity and course specifiers to describe a study population in terms of current and past psychiatric diagnoses (American Psychiatric Association, 2016). The SCID has multiple sections to assess mental health disorders. The section of the interview used in the present study assess a wide aspect of the participant's life such as their appetite, sleeping, concentration, making decisions, losing the interest of daily activity, suicidal thoughts, tiredness, hopelessness, etc. (American Psychiatric Association, 2015). To administrate the SCID, researchers ask mandatory questions and where necessary then ask optional scripted questions in order to reliably assess symptoms against the diagnostic criteria.

The SCID implements a decision tree approach (skip logic) that encourages the researcher to skip subsequent questions, or whole diagnostic sections, when sufficient criteria are not met. Questions started with open-ended and are followed up with some elaboration and examples. If further clarification is required, the interviewer will then ask supplementary (their own) questions, such as how depression has affected their daily life, and whether they have lost interest in any of the daily activities that they were used to doing in the past. The ratings are based not on only yes or no answers but rather based on the fulfilment of DSM-5 criteria. Each question is rated as follows: ? = inadequate information, 1 = symptom clearly absent or criteria not met, 2 = sub-threshold condition that almost meets criteria, and 3 = threshold for criteria met. A rating of "3" is scored when the interviewee provides exemplary information, and incidences that fulfil the criteria of the SCID guidelines occurs with sufficient frequency at least two weeks or over for current

depressive disorder. The SCID has been shown to exhibit good validity, and reliability and considered as a golden tool to assess mental disorders since 1970 (Spitzer et al., 1992).

3.2.7 Description of Data Analysis

The analysis of the data was guided by the hypotheses. The data were analysed and presented using descriptive and inferential statistics and correlations. Bivariate correlational analysis was used to explore associations between dissociation and the target variables (depressive disorder, childhood adversity, current adversity, academic performance). All data analyses from the study were performed using SPSS software version 23. The significance of the findings was assessed at $p<.05$, and the sample size effect was reported.

3.2.8 Ethical Considerations

This study was approved by the School Ethics Committee, Durham University (Friday, 6th May 2016- Re: ESC2/2016/MSC03) (see Appendix 3.11).

1- Emotional distress and suicidal thoughts

Based on the nature of the questions provided in the interviews, participants might experience emotional distress. However, participants were given the chance to use their right to withdraw at any point. In addition, the researcher provided a list of helplines for participants (see Appendix 3.3) and interviews were terminated if necessary. Also, the diagnostic interview includes some questions about suicidal thoughts, and a number of participants might express serious suicidal thoughts. In this situation, the researcher conducted the risk assessment form (see Appendix 3.4) and contacted a clinician in order to have this situation directed to an appropriate contact if necessary. An 'on call' clinician was available each time an interview was conducted (researcher's supervisor) in case there

was a need for immediate help. The researcher's supervisor was a practitioner involved in mental health services.

2-Anonymity and Confidentiality

All information in this study was treated with a high level of confidentiality.

A. The Online Survey

The entire online survey data was stored on a secure server according to Qualtrics data privacy and security statements (as detailed herein: http://www.qualtrics.com/privacy-statement/ and http://www.qualtrics.com/security-statement/. "For protection of your confidentiality, no information in the survey will identify you personally, except what has been aforementioned" (SoWise Study).

The researcher had access to contacts details for potential participants via Qualtrics software. If potential participants consented to be contacted in the future for further studies, they were asked to provide their contact details which were matched to a secure server and only the researcher had access to this server.

B. The interviews

All data was recorded digitally, whether from the face-to-face or telephone interviews on a Durham University approved digital recorder. Storage of all data was in accordance with university procedures. The recorded files were transferred electronically by the researcher directly upon completion of the interviews onto the University's secure network, and then immediately were followed by deletion of recorded files from the digital recorder. De-identified Documentation files which were The Structure Clinical Interview-SCID-5-RV and The Dissociative Experiences Scale-II (hard copies) were kept separately from participants' consent forms in a locked cabinet inside the researcher's office (secured

office) in the Wolfson building at all times to reduce the risk of identifying individual's identity. All information remained confidential, and only the researcher had access to participants' information. Results publicised on a group level with de-identified data so that no individual participant can be identified. We maintained and protected participants' information during the course of this project. However, if significant risk to participants or others has been identified we provided participants' information to health practitioners in order to provide urgent support. This is the only part of personal information can be identified, and the researcher made it clear to potential participants (see Appendix 3.1).

In addition, 10 percent of recorded interview files was selected randomly and rated by the researcher's supervisor to examine the inter-rating-reliability of the researcher's ratings on the SCID-5-RV.

3- Other Ethical Considerations

Participants sometimes have high expectations, and might think that the researcher was a clinician and qualified to provide mental health support and advice, so it was important to let them know that he was a researcher, and the interview was only for research purposes. This was clearly stated in the information sheet. .

In addition, by the end of the interview, the researcher did not let the participants know if they met diagnostic criteria for a depressive disorder as the study was for research purposes only and the researcher was not qualified to provide a clinical service. However, the researcher informed participants that they should talk to a family member or contact their GP for help if they felt distressed immediately after the interview or later in the day. The researcher also provided a list of helplines, and if they need immediate help the researcher transferred them directly to a clinician.

Ethical Considerations for the Researcher:

1-The researcher might experience emotional distress, however, regular supervision and meeting with the supervisors took place to manage this. Further, the researcher was in contact with his supervisor via telephone if anything occurred during the interviews. She was available each time an interview was conducted.

2-The researcher might experience physical threats by potential participants if they got highly distressed particularly those with suicidal thoughts. To minimise risks, the researcher made sure that supervisors knew where he was, what time interviews started, and what time interviews should be completed. Although the researcher was alone with individuals not known to him the location was suitable, and the room was accessible, it was not isolated and was near to the applicant's supervisor office. Further, the researcher was in contact with his supervisor via telephone if anything occurred during the interviews. She was available each time an interview was conducted.

3- SCID Training

At the first stage, the researcher had acquired the Permission to use the SCID in his study and the relevant materials from the Authority (American Psychiatric Association) in the United States. Then, Dr Webster spoke by phone to the Rights Manager for the SCID and was informed that there was no formal training programme but that the SCID manual provided all the instructions necessary. The Rights Manager informed Dr Webster that she was available to help if there were any issues, but that usually no more is needed than basic instructions, particularly as the researcher would only be using Module A. The researcher also contacted the Rights Manager, and was told there was no on-site training in the UK, but there were training videos.

***The researcher has taken several steps to ensure that the appropriate training for the SCID has been completed:**

1-The researcher has read the User's Guide with the main focus on Module A (Major depressive symptoms), and reviewed it several times. This gave him sufficient guidance on how to use the SCID.

2-The researcher has watched training videos.

3-The researcher has engaged in site training meetings with Dr Webster who is fully trained and proficient with the SCID having used it in previous research. We went over the SCID to see how the researcher was with administering it. We also had a discussion about different situations on how to use it. In addition, the researcher completed an interview with Dr Webster who role played a person with depression. Upon completion of the interview, Dr Webster then reviewed and discussed the researcher's ratings to check inter-rating reliability (level of agreement of ratings). Finally, the researcher was asked to interview three people with Dr Webster present and six people on his own.

4-The researcher has interviewed three people with Dr Webster present, and she has reviewed the applicant's ratings to examine the inter- rating-reliability.

5-The researcher has interviewed six people on his own that he does not know so he can experience administering the interview with different people. Upon completion of the interviews, Dr Webster has reviewed the researcher's ratings to see if he has reached the agreement level or not.

Dr Webster has confirmed that the researcher has reached a proficient level for administering the SCID.

3.3 Results

3.3.1 Descriptive data

A total of 50 university students participated in this study, with a mean age of 20.96 years (SD 3.42). The sample was predominantly women (82%, n=41), with majority of the full sample being undergraduate students (94%, n=47). Most of the participants were studying in year one and year two (66%, n=33), with ages ranging from 18-21 years (80%, n=40). The majority of the participants had moved away from their home area to study at university (94%,n=47). Furthermore, the majority of the students were not employed whilst studying at university (78%, n=39).

3.3.2 Clinical characteristics of the sample

The full sample was divided into two groups based on the outcome of the structured clinical interview (no depressive disorder reported, depressive disorder reported). Out of the full sample 38% (N=19) met the criteria for depressive disorder, of those, 32% (N=16) were female, with most students in year one and year two of study 32% (N=16), and had moved away from their home area to study at university 36% (N=18). The majority of those who reported depressive disorder were not employed whilst studying at university 30% (N=15) (see Table 3.1).

The full sample was divided into two groups based on dissociative disorder scores on The Dissociative Experiences Scale-II (Carlson et al., 1993), no dissociative disorder reported (<=29), and dissociative disorder reported (>=30). 24% of the sample (N=12) who met the inclusion criteria for dissociative disorder, were women and had moved away from home to study at university 24% (N=12), with the majority from year one and two

18% (N=9), aged between 18-23 18% (N=9). The majority of those who reported dissociative disorder were not employed whilst studying at university 20% (N=10).

Within the full sample, students who met the criteria for depressive disorder reported significantly higher mean scores on dissociative disorder (*M*=921, *SD*=220) compared to the no depressive disorder group (*M*=430, *SD*=188), t(48)=8.37, p=.000). There were no other significant differences between groups other than those highlighted.

Table 3.1: Characteristics of the sample based on demographic information, and clinical characteristics of the sample based on dissociative disorder and depressive disorder

Variable	Sample (%) Total (n=50)	No dissociative disorder (n= 38)	Dissociative disorder (n= 12)	No depressive disorder (n= 31)	Depressive disorder (n= 19)
Gender (Women)	82%(41)	76.3% (29)	100.0% (12)	80.6% (25)	84.2% (16)
	18%(9)				
Age (years)					
18-19	38.0%(19)	32.0%(16)	6.0%(3)	32.3%(10)	47.4%(9)
20-21	42.0%(21)	32.0%(16)	10.0%(5)	51.6%(16)	26.3%(5)
22-23	8.0%(4)	6.0%(3)	2.0%(1)	6.5%(2)	10.6%(2)
24-33	12.0%(6)	6.0%(3)	6.0%(3)	15.9%(3)	15.9%(3)
Year of study (undergraduate)					
First Year 1	40.0%(20)	39.5%(15)	41.7%(5)	35.5%(11)	47.4%(9)
Second Year 2	26.0%(13)	23.7%(9)	33.3%(4)	19.4%(6)	36.8%(7)
Third Year 3	26.0%(13)	31.6%(12)	8.3%(1)	38.7%(12)	5.3%(1)
Fourth Year 4	2.0%(1)	2.6%(1)	-	5.3%(1)	-
Postgrad	6.0%(3)	2.6%(1)	16.7%(2)	3.2%(21)	10.5 %(2)

Moved away from home					
Yes	94.0%(47)	92.1%(35)	100.0%(12)	93.5%(29)	94.0%(18)
No	6.0% (3)	7.9%(3)	-	6.5%(2)	5.3%(1)
Employed					
Yes	22.0%(11)	23.7%(9)	16.7%(2)	22.6%(7)	21.1%(4)
No	78.0%(39)	76.3%(29)	83.3%(10)	77.4%(24)	78.9%(15)

Table 3.2: Mean scores comparison for depression groups by dissociative disorder, and academic performance.

Variable	No depressive disorder (1)	Depressive disorder (2)	Comparison Groups	P-Value
Dissociative Disorder	*M*=430.97 (*SD* 188.70)	*M*=921.58. (*SD* 220.38)	1 (No depressive disorder) VS 2 (Depressive disorder)	.000*
Academic Performance	*M*=40.00 (*SD* 5.11)	*M*=34.28 (*SD* 9.84)	1 VS 2	.010*

*Significant at the 0.01 level.

3.3.4 Research questions and hypotheses being examined

To examine the study research questions and hypotheses a bivariate correlation analysis using person correlation was implemented. In this analysis dissociative disorder and three key variables (current adversity, depressive disorder, academic performance) were included.

3.3.4.1 Dissociative disorder and current adversity

Hypothesis one: It was hypothesised that there was a significant positive relationship between dissociative disorder and current adversity.

A Pearson correlation test was used to examine the relationship between dissociative disorder and current adversity. There was a significant positive relationship between the two variables at the 0.01 level (see Table 3.3).

3.3.4.2 Dissociative disorder and depressive disorder

Hypothesis two: It was hypothesised that there was a significant positive relationship between dissociative disorder and depressive disorder.

A Pearson correlation test examined the relationship between dissociative disorder and depressive disorder. There was a significant positive relationship between the two variables at the 0.05 level (see Table 3.3).

3.3.4.3 Dissociative disorder and academic performance

Hypothesis three: It was hypothesised that there was a significant negative relationship between dissociative disorder and academic performance.

A Pearson correlation test examined the relationship between dissociative disorder and academic performance. There was a significant negative relationship between the two variables at the 0.01 level (see Table 3.3).

Table 3.3: Correlations of dissociative disorder, depressive disorder, current adversity, and academic performance

Variables	1	2	3	4
1. Dissociative disorder	-			
2. Current adversity	.347*	-		
3. Depressive disorder	.770**	.291*	-	
4. Academic performance	-.280*	-.450**	-.363**	-

*Significant at the 0.01 level.
**Significant at the 0.05 level.

3.4 Discussion

3.4.1 Frequency of dissociative and depressive disorders

The present study aimed to examine the relationship between dissociation and three key variables: depressive disorder, current adversity and academic performance. The frequency of dissociative disorder found in the study was 24% (N = 12), taking into account the limitation of this study that the sample is small and is not representative, it is slightly higher than previous studies in the literature that found a prevalence of dissociative disorder ranging from 13% to 20% (Foote, Smolin, Kaplan, Legatt, & Lipschitz, 2006;

Colin Ross & Anderson, 1991). This may be due in part to that all participants in the present study were a subsample of Study 1 and selected based on childhood adversity scores in Study 1 (Chapter 2). Such adversity often co-occurs with dissociative disorder (Foote et al., 2006), and this may contribute to the slightly increased frequency of dissociative disorder reported here as compared to previous studies.

Similarly the frequency of depressive disorder found in this study, at 38% (N = 19), is higher than the prevalence rates found in previous studies by 11% (Siddique, Imtiaz, Haider, & Afzal, 2015). It may be due, in part, on this study's sample being selected based on reported childhood adversity and depressive symptoms, where some of the participants were found to have severe depressive symptoms through the self-report measure. Moreover, the combination of childhood adversity and current adversity in addition to the nature of the stresses of university, which encompass social, academic, and financial demands, may contribute to an increased frequency of depressive disorder among this small sample of university students compared to other populations.

3.4.2 The relationship between dissociation and current adversity

Dissociative disorder has been shown previously to have a significant positive relationship with both ChA and CuA. Further, adverse experiences place individuals at greater risk for mental health problems. Indeed, individuals who experienced ChA are more likely to have such symptoms and adverse experiences throughout their lifespan than those without ChA. In support of the first hypothesis the present study found that dissociative disorder had a significant positive relationship with CuA. Consistent with this findings, previous studies have shown comparable results (Brunner et al., 2000; Dalenberg et al., 2012; Dalenberg & Palesh, 2004; Gary Peterson, 1991; Martinez-Taboas & Bernal, 2000; Ross et al., 1991; Sanders & Giolas, 1991; Vonderlin et al., 2018; Watson et al.,

2006). This may be partially explained by the nature of university stressors and CuA, especially severe experiences such as the serious illness or death of parents, family members, or other relatives, or the break-up of close relationships. Such severe experiences are likely to be linked to dissociative symptoms among individuals who use dissociation as a defence mechanism in the face of adversity to escape harmful memories from such adversities. This is explained by the theory of dissociation by Janet (1901) which proposes that dissociation of adverse situations from consciousness is thought to be as a core defence against stressful experiences (van der Hart & Horst, 1989). In this case, dissociation provides a way for individuals to dissociate from remembering such experiences thus avoiding unwanted memories (Carlson, Yates, & Sroufe, 2009; Vermetten, Dorahy, & Spiegel, 2007).

Another explanation may be derived in part from Freyd's shareability theory, which proposes that memory is formed by the freedom of discussion and the exercise of that freedom (Herman, 1999). Dissociative symptoms as a defence mechanism are facilitated by the prohibition of discussion among family or in the community about specific adverse experiences such as sexual abuse or other severe abuse. This proposal is supported by a study showing individuals lose some adverse memories in order to dissociate from reality after the experience of severe adversity if they do not have an opportunity to talk about their feelings (Richards & Gross, 2000). This may also partially explain the occurrence of severe dissociative symptoms and the significant positive relationship with CuA in addition to a history of ChA.

3.4.3 The relationship between dissociation and depressive disorder

Individuals with elevated levels of dissociative symptoms tend to have more mental health issues, including depression (Maaranen, Tanskanen, Haatainen, et al., 2005). Findings from this study support the second hypothesis of a significant positive relationship between dissociative symptoms and depression. These findings are consistent with previous studies in the literature (Levin & Spei, 2004; Maaranen, Tanskanen, Honkalampi, et al., 2005). Considering that all participants in this study were selected based on reported ChA and depressive symptoms, the significant positive relationship between dissociative disorder and depressive disorder may be explained in part, as mentioned in chapter 2, by the cognitive vulnerability model of depression (Beck, 1987). This model proposes that a cognitive focus on negative content precedes depression, and subsequently, negative information processing forms a vulnerability to developing depressive symptoms. Thus, the reporting of adversity will induce the likelihood of reporting depressive symptoms (Beck, 1987). As a result, having adverse experiences and more severe depressive symptoms will, in turn, increase the risk for dissociative disorder, as individuals with such conditions may use these symptoms to dissociate from severe adversity and depressive symptoms. This is supported by one of the earliest theories of dissociation that posited dissociation as a coping mechanism used by those reporting severe depressive symptoms which influence cognition and consciousness as a way to avoid negative feelings and emotions (Katon, Kleinman, & Rosen, 1982).

3.4.4 The relationship between dissociation and academic performance

Dissociative disorder has been shown to have a negative impact on academic outcomes and is likely to induce adverse effects on academic performance. Results from this study support the third hypothesis that dissociative disorder has a significant negative

relationship with academic performance. Consistent with our findings, previous evidence in the literature has revealed similar results (Dell & Eisenhower, 1990; Flisher et al., 1997; Hobbs & Coons, 1994; Perzow et al., 2013). Dissociative symptoms might hinder individuals from becoming involved in classroom discussions and lectures, as symptoms of dissociative disorder including disconnection from the realty, thus, inducing lower levels of participation in general studies and university activities. That, in turn, can lead to poor academic performance and a lack of connectedness to the university campus life. This finding for academic performance may be underpinned by the evidence from research showing cognitive impairment associated with dissociation such as memory dysfunction, poor attention, perception and a disruption of identity (Osman et al, 2015).

3.4.5 Strengths and implications

The main strength of this study is the use of the structured clinical interview (SCID) which is the 'golden measure' for the assessment of depressive disorder. Further, investigating the relationship between dissociative disorder and academic performance among university students adds novel knowledge to the existing literature, which has hitherto focussed on less severe forms of mental illness. As such, valuable information has been obtained that may help students, especially those with the more severe conditions of dissociative and depressive disorders. Increasing the accessibility and effectiveness of mental health services for students suffering from severe types of mental health disorders such as dissociation and depression is important. It is vital also to create and implement programmes that improve the awareness of symptoms of severe mental health problems such as dissociative and depressive disorders along with the negative outcomes that can occur if help is not sought for such experiences. The focus could rely on early screening for entrance to the university or during year one for both depressive and dissociative symptoms. Universities may benefit from the use of cognitive behavioural treatment

strategies such as those proposed by Kennerley (1996). For students reporting dissociative disorder with adversity, such strategies include cognitive restructuring and schema work, which could be useful in designing clinical intervention programs. This is very important for both students and universities as it induces the use of treatment programs provided by experienced practitioners and results in elevated levels of engagement and connectedness between students and university environments, ultimately improving the effectiveness of such interventions.

3.4.6 Limitations, and future research

This study has several limitations. First, the sample was small with a total of 50 participants meeting the inclusion criteria. However, based on statistical testing, this sample size is suitable for answering the research questions. Second, the reliance on self-reported measures in this study is a limitation as discussed in details in Chapter 2. Third, as this study was a subsample of the first study reported, similarly, the majority of the present sample was women and from the department of psychology. This may influence the generalisation of the results of this study to other schools and departments, and may hinder significant gender differences within the sample as detailed in Chapter 2. In addition, future research should focus on examining multidimensional factors that promote students' mental health and adjustment.

Other future studies with specific interest in severe mental health symptoms could build on the present findings by implementing a theoretical framework that includes dissociative, depressive disorders, and cognitive function using a longitudinal method to investigate changes of dissociative, depressive symptoms and patterns of cognitive functioning over time. It would be worth exploring these in detail, as symptoms of dissociation have negative influence on cognition. This theoretical framework could be

guided by the theory of dissociation and cognitive vulnerability model which will expand our understanding of such variables among university students.

3.4.7 Conclusion

Dissociative disorder is linked with the experience of current adversity and depressive disorders. Further, it is associated with lower levels of academic performance. Increasing the accessibility and effectiveness of mental health services for students suffering from severe types of mental health disorders such as dissociation and depression is important. Students with dissociative disorders may have a lack of connectedness to the university campus life, thus future work should focus on investigating multidimensional factors that promote students' mental health, engagement with university life and adjustment.

CHAPTER FOUR

Study 3: The influence of promotive factors on resilience and adjustment of university students

4.1.1 Introduction

Considerable evidence has shown that students are vulnerable to experience psychological problems during the transition to university due to challenges in social, emotional, and academic aspects of their life. Stressors such as transitioning into the university level of education is a major part of life for many individuals (Munora, 2009). In addition, students experience challenges in forming new social networks, adapting to new societal and familial roles as well as new financial responsibilities (Pidgeon, 2014). An increasing amount of research focusing on university students' mental health and, resilience, has shown the essential role of resilience for students in transitioning and adjusting to university life (Richmond, 2008). However, a successful transition to university cannot be completely attributed to resilience levels. Other factors such as, social support, having a sense of belonging to their university, peer support and hope are also involved (Pratt, 2000). The results of Study 1 as outlined in Chapter 2 suggest that the role played by varying sources of social support is critical for the transition to university, as a low level of social support results in a high risk of depression and failure to adapt (Bukhari & Afzal, 2017). Although social support has a significant influence on student mental health and adjustment, it is proposed that social support should be part of a multidimensional context that promotes resilience, adjustment and induces more effective intervention and preventive programmes for students (DeRosier, Frank, Schwartz, & Leary, 2013; Hartley, 2012). There is a clear need for a more comprehensive understanding of the factors related to resilience and wellbeing as a multidimensional picture that encourages positive transitions and the successful adjustment of university students.

4.1.2 Promotive factors and resilience

Definitions of resilience vary in the literature. For example, resilience has been defined as the capacity to adapt to new environments successfully (Zolkoski, 2012). One of the recent definitions of resilience states that it is the ability to recover from negative events (Garmezy, 2016). Many of the definitions are informative, yet fail to address factors that might contribute to resilience, such as hope. The use of a definition that has a wider scope of such elements is crucial to better understand and identify the concept of resilience with its promotive factors. Therefore, this study will consider the operational definition provided by (Rutter, 1985) due to its coverage of a range of factors and defines resilience as a dynamic process that involves external and internal factors such as social support with the ability to overcome stress and adversity.

Resilience is a significant factor that is related to adaptation of students to the university environment (Richmond, 2008). It is important as it helps minimise the risk factors of students experiencing stressors such as failing to transition into their new environment and cope with adverse life events whilst successfully dealing with the associated psychological stress (Munora, 2009). Resilience and its promotive factors (identified as assets or resources internally and externally that induce resilience levels) also helps in the management of academic demands and improves academic results alongside facilitating effective coping action plans when experiencing academic pressures (Pratt, 2000). Without this capability, the stressors that university students experience have the ability to negatively affect their mental health, impede adjustment and increase the risk of psychological problems (Pidgeon, 2014).

There are multidimensional aspects of promotive factors that include the individual level representing factors within individuals, the family level representing factors related to

family members and the community level representing factors from the wider community. These levels are presented within the literature as having various elements such as optimism, tolerance, coping strategies, hope (individual level), social support from family (family level), school support, belonging, and closeness of relationships from friends and significant others (community level) (Leary, 2012; Pidgeon, 2014). The focus of this study will cover the three levels and will include hope, coping strategies, sources of social support, university belonging and university support. This multidimensional approach is crucial in defining resilience of students and, in turn, their adjustment to university life.

There is a lack of research using this multidimensional approach to promotive factors contributing to resilience, wellbeing or academic success in students who are well adjusted to the new environment. However, several factors that promote easy adaptation among university students who are trying to deal with various novel stressors such as transition into their new life and academic demands have been addressed in the literature. For instance, coping strategies have been shown to be associated with greater levels of resilience and positive academic outcomes (Zolkoski, 2012). Findings from adolescent samples revealed that resilient participants had higher scores for coping strategies and good relationships with their parents and friends compared to non-resilient participants (Dumont, 1999; Herman-Stahl & Petersen, 1996) .

Moreover, the assistance, warmth, encouragement and care from close relationships and cohesion within the family increase resilience of students (Santini, Koyanagi, Tyrovolas, Mason, & Haro, 2015). Research has shown a link between sources of social support (parental support, peers, schools, teachers) and resilience and, in turn, the ability to adapt positively to university stressors such as transition (Southwick, 2006; Urquhart, 2007), and achieving academic success (Fass, 2002). A study with a sample of university students found that receiving reasonable levels of social support from parents, peers,

schools and teachers was significantly associated with resilience and positive academic performance (Dawson, 2013). Another study supported these results and found that elevated levels of social support were linked to resilience and academic achievement (Tusaie, 2007). Although these studies postulated the vital role of promotive factors such as coping skills and social support on resilience and student adjustment to university life, the research did not encompass the multiple dimensions of internal and external factors such as hope, coping strategies, social support and university belonging. Furthermore, the influence of these factors on the current adversity and stressors of students has not been considered.

The outcomes of promotive factors for resilience depend on the context in which they are being applied. There are several outcomes factors for resilience including for example academic performance. Better academic performance is likely to be reported for students who are resilient enough to successfully deal with stressors and transition into a university such that they can concentrate on attaining their academic achievements. The primary outcome for this population is academic performance which is, in turn, the central aim for this population of students joining university (Cefai, 2008). A framework of promotive factors among university students that will aid positive adjustment and achieve positive social, psychological and academic outcomes is essential. Thus this framework is important to identify promotive factors for resilience for university students by considering a multidimensional construct of promotive factors. This will inform the development of preventive and intervention programs that assist students in successfully adjusting to the university and increasing their wellbeing.

4.1.3 Resiliency theory

A comprehensive framework for resilience and its promoting factors is defined and reinforced by resiliency theory. It focuses on the positive individual, contextual and social factors that interfere with the developmental trajectories ranging from risk to problems associated with poor health outcomes, mental distress and certain behaviours (Zimmerman, 2005). The positive individual, contextual and social factors are usually referred to as promotive factors that work in opposition to risk factors. These factors assist students in overcoming the negative impacts of exposure to risk as well as enhancing their levels of resilience (Zimmerman, 2005). There are two types of promotive factors: resources and assets. For example, hope and coping strategies are assets whilst resources are external factors such as social support from the family, friends and significant others. For the purpose of this study, a framework that consists both of assets and resources will be examined in order to gain a deeper insight into multiple promotive factors for the resilience, adjustment, and wellbeing of students.

4.1.4 Hope and social and emotional wellbeing

Hope is an essential element of resilience, student adjustment, wellbeing and positive outcomes (Day, Hanson, Maltby, Proctor, & Wood, 2010; Kirmani,Sharma, Anas, & Sanam, 2015; Lopez, Rose, Robinson, Marques, & Pais, 2009; Ong, Edwards, & Bergeman, 2006; Snyder et al., 2002). It is operationally defined by Snyder as an individual's ability to think positively and develop goals, as well as strategies to achieve those goals, further inducing sustained motivation to encourage the use of such strategies. This concept is derived from Snyder (1995) model of hope that relies on goal-directed thinking. In fact, it is important for students to make use of the two elements of hope: agency, which is the ability to classify goals, and pathways, which is the ability to solve

problems, leading to reach targeted goals (Du & King, 2013). Such positive thoughts and strategies are used to engage with stressors and adverse situations and in turn, reduce negative outcomes. Individuals with higher levels of hope on a daily basis are more likely to reach their goals than are others, and if their goals are hindered, they have the ability to navigate difficulties to reach their targets successfully regardless (Snyder et al., 2002). Having greater levels of hope is essential during and after transitional periods such as the transition into university, as such thoughts and strategies promote higher levels of resilience and aid in the adjustment into university, combatting stressors and easing difficult times (Liu, Kia-Keating, & Modir, 2017). Research evidence has shown that hope is a significant predictor of successful student adjustment, wellbeing and reduced rates of depressive symptoms and that it is linked to positive outcomes (Liu et al., 2017; Martin , Swartz, & Madson, 1999; Rand, Martin, & Shea, 2011; Snyder et al., 2002). This firmly demonstrates that hope is linked to an individual's belief in their own capability to adjust and accomplish their goals and thus enhances resilience. Hence, individuals with greater levels of hope are likely to pursue and find an alternate solution when confronted with difficulties or frustrations (Rand et al., 2011). This adaptability improves the ability to implement the cognitive processes required to accomplish goals and achieve success for students (Snyder et al., 2002).

4.1.5 Coping strategies and social and emotional wellbeing

Coping strategies are important for student adjustment, wellbeing and academic success (Archer, Cantwell, & Bourke, 1999; Atindanbila & Abasimi, 2011; Chow et al., 2018). A coping strategy is operationally defined as a multidimensional concept represented by a self-regulation construct that consists of cognitive and behavioural strategies and mechanisms that are implemented to manage and deal with stressors and adverse situations (Lazarus & Folkman, 1984). Such mechanisms consist of problem-

solving strategies, emotional considerations or avoidance-based strategies to face adverse situations and reduce their impact (Stewart et al., 1997). Emotion-focused strategies rely on emotional activities, while avoidance coping strategies are those aiming to distract or remove the focus from the adverse situation. Earlier studies examining student transitional strain revealed that the use of coping strategies act as a positive significant predictor of the ability of students to adjust successfully to the obstacles and stressors of the university transition (Abdullah, Elias, Uli, & Mahyuddin, 2010; Julal, 2013). Moreover, coping skills have been shown to have a significant positive influence on academic performance (Abdullah et al., 2010; Struthers, Perry, & Menec, 2000), and decrease depressive symptoms (Atindanbila & Abasimi, 2011). This might be linked to the finding that integrating direct action as a response to stressful situations produces positive feelings even among individuals with depressive symptoms (Folkman & Moskowitz, 2004).

In contrast, those with lower levels of coping strategies experience poorer outcomes, poorer levels of adjustment and are more likely to report mental health problems. Indeed, students who see their issues as insurmountable are likely to experience feelings of helplessness and depression and, subsequently have a greater probability of failure or dropping out of their course (Artistico, Cervone, & Pezzuti, 2003; McWilliams, Cox, & Enns, 2003). Those who implement coping skills and actions to deal with difficulties and obstacles, however, are more likely to succeed (Struthers et al., 2000). In this respect, coping strategies are important for students while attending university as such mechanisms induce higher levels of resilience and aid adjustment to university stressors and demands. In turn, a failure to use an adequate coping response to stressors subsequently leads to a reduced capacity for concentration, reduced psychological wellbeing and poorer adjustment (Innes, 2017).

Evidence has shown that only relying on avoidance strategies coupled with a lack of problem-focused coping mechanisms is linked to poorer adjustment, more psychosocial issues, greater levels of depression and worse mental health problems compared to those using problem-focused coping mechanisms (Artistico et al., 2003; McWilliams et al., 2003). In contrast, studies have shown that a greater reliance on problem-focused coping is linked to higher levels of adjustment and better health outcomes outcomes (Aldwin & Park, 2004; Artistico et al., 2003), suggesting that active coping strategies are more successful in inducing positive outcomes. It is widely known that problem-focused active strategies are perceived as the most successful coping strategy and result in improved student adjustment (Folkman & Moskowitz, 2004). Furthermore, empirical evidence reveals that those who implement active coping strategies are more capable of facing difficulties and adjusting to such situations (Julal, 2013). For example, a study examining stressors among university students revealed that those who implement active coping strategies are more likely to adjust, and also to seek help and university support to manage and deal with transition issues (Morton, Mergler, & Boman, 2014), suggesting that coping strategies are a factor that promotes positive outcomes and leads to successful adjustment with university stressors.

4.1.6 Social support and social and emotional wellbeing

Social support is important for student resilience, adjustment and wellbeing (Dawson & Pooley, 2013). Individuals with higher levels of frequent social support are better able to deal with stressful situations compared to those with lower levels of social support (Ghasemi, 2011; Phinney & Haas, 2003). Such higher levels of social support suggest the importance of social networks during the transition into new environments in order to promote resilience and adjustment, while a lack of social support consequently leads to low levels of resilience, adjustment and wellbeing (Dawson & Pooley, 2013).

Research has demonstrated that social support is a significant predictor of student resilience and adjustment (Arambewela & Hall, 2009; Bernardon, Babb, Hakim-Larson, & Gragg, 2011; Weidong et al., 2012). For example, a study of university students revealed that social support was a significant predictor of resilience and student adjustment (Dawson & Pooley, 2013), moreover (Sara, 2011) found a significant positive relationship between social support, resilience and adjusting to university life. Studies have also shown the important role of specific sources of social support for resilience and adjustment, specifically social support from family, friends, and significant others (Ghasemi, 2011; Hosseini, 2009); .

4.1.7 University belonging and social and emotional wellbeing

The need of belonging to individuals and communities is a basic human desire (Leary & Baumeister, 2017). It is identified by the need for stabile feelings of belonging to the community with regular contact and caring relationships (Baumeister & Leary, 1995). The theory of Belongingness endorses this assumption and suggests that minimum levels of belonging is crucial to individuals' social and emotional wellbeing (Baumeister & Leary, 1995). A lack of belonging has been shown to be associated with negative health outcomes and elevated levels of mental health issues (Cornwell & Waite, 2009; Hall-Lande, Eisenberg, Christenson, & Neumark-Sztainer, 2007). University belonging is an essential element of student adjustment, wellbeing and academic success. Although university belonging seems to examine aspects of social support, its assessment is in fact beyond such aspects because it investigates students' perceptions of belonging and fitting into their university environment (Lee & Robbins, 2000). University belonging is operationally defined as a student's perception of, feeling about and ability to adapt and belong to a campus environment by creating and developing good relationships, and through involvement in university activities (Lee & Robbins, 2000).

Belonging is an essential factor that reduce the risk of negative outcomes at critical periods such as the transition to university life, as these aspects induce elevated levels of resilience and ease the adaption in the face of stressors and difficulties (Reivich & Shatté, 2002). Research evidence has shown that university students' feelings of belonging during and after the transition is significantly linked to elevated academic motivation and greater levels of successful adjustment (Pittman & Richmond, 2008). For example, a systematic review of studies of young people has shown that connectedness was a significant predictor of adjustment and wellbeing, and greater levels of belonging were linked to positive outcomes for individuals (García-Moya, Bunn, Jiménez-Iglesias, Paniagua, & Brooks, 2018). These studies demonstrated that belonging is usually regarded as positive factors that promote higher levels of resilience, wellbeing and successful adjustment for students.

4.1.8 **University support and social and emotional wellbeing**

Universities have been working for years to comprehend the influence of university support services on student adjustment and success. Attainment signs such as student Grade Points Average (GPA), the number of withdrawals from university and graduation rates have formed a somewhat improved insight into the levels of success, which has resulted in a better understanding of student adjustment and academic success (Charles & Mertler, 2002; Rogers, 1988). Likewise, defining the connection between university support, the environment and student involvement and its impact on adjustment and success in university is essential. Researchers have contributed greatly to the understanding of how student involvement, interaction and social networking in a university environment have impacted university student adjustment and success (Astin, 1993; Ernest Pascarella, 2006; Ernest Pascarella, Seifert, & Whitt, 2008). Kuh (2011) investigated university engagement with a focus on the support and interaction between students, instructors and

peers, whilst Astin (1985) examined involvement represented by engagement in an active environment. These two approaches have been cited in the literature as leading areas of research on student adjustment and success (Gansemer-Topf & Schuh, 2003; Wilson, 2005; Yorke, 2004).

It was proposed that to increase university involvement and support, the university needed to make use of time, effort, the students' commitment to the university and the available resources (Duncan & Dick, 2000; Thomas, 2002; Yorke, 2004). Evidence has shown that university support coupled with student commitment is a significant predictor of adjustment and success and is linked to greater levels of positive outcomes for students (Astin, 1993; Hill & Craft, 2003; Stebleton, Soria, & Huesman Jr, 2014; Wibrowski, Matthews, & Kitsantas, 2017). It is also essential to consider the evidence that university programs might contribute to the support and involvement of students through group and peer activities, tutoring services, computer-based tutorials and programs to improve student skills (Wibrowski et al., 2017). Instructor support and relationship with students have also been shown to lead to successful student adjustment and positive outcomes (Pascarella & Terenzini, 1991; Thomas, 2002).

Although previous empirical evidence discussed in this introduction has shown that hope, coping strategies, sources of social support, university connectedness and university support are linked to positive outcomes and promotes successful adjustment for students, there are still gaps in the literature. Further research is needed as previous studies have not considered the multidimensional context of promotive factors and only focused on single outcomes, which in turn may hinder our understanding of how students implement such factors and where to put more efforts for helping students while attending university. Such multidimensional contexts will aid in providing a holistic picture of the promotive factors of resilience and student wellbeing. Consequently it will lead to better adjustment through

the design of more effective intervention and preventive programs. There is a need to account for current adversity when examining the influence of such promotive factors to tackle such adversities in university students.

4.1.9 Rationale

Research evidence has been shown that internal and external promotive factors of resilience and wellbeing such as social support and coping strategies are vital to consider when examining young people stressors such as transitioning into new environments and dealing with novel demands (Atindanbila & Abasimi, 2011; Dawson & Pooley, 2013; Dumont, 1999). The lack of receiving and accessing such factors appears to have enduring effects on student transitions into university, and therefore lowers their levels of resilience, adjustment and wellbeing. Although a growing body of research has focused on resilience and the role of promotive factors in achieving a successful transition and adjustment into university life among young people, there are still some limitations. First, the majority of this research investigated a single predictor and outcome factor. Second it focused on one context, and did not consider a conceptual framework that includes various settings and multiple possible outcomes. In light of these limitations it is suggested that defining specific promotive factors that facilitate positive outcomes for university students will widen our knowledge about these factors. This can be achieved by using multidimensional levels based on resiliency theory and will aid universities in improving their services, and in the planning of intervention and preventive programs for students.

4.1.10 Aims and hypotheses

1. The aim is to examine the influence of promotive factors on resilience among university students, with the hypothesis being that promotive factors will be a significant predictor of increased levels of resilience.

2. The aim is to examine the influence of promotive factors on depression, with the hypothesis being that lack of promotive factors will be a significant predictor of increased levels of depressive symptoms.

3. The aim is to examine the role of promotive factors on university students' adjustment, with the hypothesis being that promotive factors will be a significant predictor of better university students' adjustment.

4.2 Methods

4.2.1 Research design

A cross sectional survey was carried out online using Qualtrics software. The aim of the current study was to examine factors that promoted resilience, wellbeing and adjustment among university students by implementing a multidimensional framework including factors at individual (hope and coping strategies), family (social support from family), and community (university belonging, university support, social support from friends, and social support from significant others) levels. The primary outcome was resilience, and the secondary outcomes were depression and academic performance.

4.2.2 Participants

Participants were all university students with the inclusion criteria being 18 years old or over, and registered students at Durham University. The sample of 404 university students (woman, n=252, men, n=148) had a mean age of 21.30 years and were recruited

from all departments and colleges. The variables to be measured within the study were hope, coping strategies, sources of social support, university connectedness, university support (these are the promotive factors that were referring to in the hypotheses), resilience, academic performance and current adversity (see measures). A link of the online survey was circulated by email to all students across schools and colleges of the university (see recruitment and procedures).

For statistical power, the sample size targeted was approximately 150 participants (based on G-Power calculation and the statistical advice of Dr Adetayo Kasim). This online survey was made available for participants during a four month period (April to end of July 2017) (see recruitment and procedures), and involved eight self-report questionnaires, which represent the study variables (see measures).

The researcher conducted a pilot study with 10 volunteer students from a range of departments. The researcher provided the information sheet and all questionnaires (full survey) to those volunteers and asked them to read the information sheet and complete all measures to estimate the average time of completion and to ensure that survey was understandable for students. The total time estimated (based on piloting) was 10-15 minutes.

4.2.3 Procedures

The study used a targeted purposive sampling of all schools and colleges of Durham University. The recruitment took place across the two campuses (Durham based campus and Queen's Campus) involving postgraduate and undergraduate students. A link of the online survey was emailed to all students at these schools by programme directors (postgraduate, undergraduate) who offered their permissions to circulate the survey, and a reminder email was sent every two weeks throughout the recruitment period.

The recruitment process involved a promotional campaign to enhance recruitment by producing postcards distributed across the university in various locations such as common rooms, eating areas, and lectures. Furthermore, the researcher used social media sites such as schools' Twitter accounts, and Facebook pages. The recruitment took place over a four month period (April - July 2017), and all participants were provided with a brief study description and a link to the survey in the recruitment emails (see Appendix 4.4). By clicking the link, the information sheet was made available (see Appendix 4.1). If participants decided to participate they then proceeded to the consent form page electronically via a click box (see Appendix4.2). If participants decided not to participate after reading the information sheet or at any point in the course of their participation, they had the right to withdraw and exit the online survey. If any participant exercised his/her right to withdraw all data related to this participant's identification number was deleted via Qualtrics software. Further, at the end of the online survey a list of help lines was provided in case students need such information (see Appendix 4.3).

All questionnaires (eight scales) were completed online, with an approximate total time of 15 minutes (based on pilot). Students from different departments volunteered to complete the questionnaires (for piloting purposes) and consented to keep their data for research purposes. Participants had the chance to start the survey and complete it later at any time during the recruitment period. Regarding incentives, all participants were asked to provide their email address (optional) for entry into a prize draw, to win one of five £50 Amazon vouchers. Those participants were allocated a unique ID number, and a list was made. A random drawing to select five winners was performed using Excel program (random number generator) to ensure fairness for all participants. Moreover, a list of Psychology students consisting unique ID numbers and emails was extracted from Qualtrics software and given anonymously to the researcher's supervisor at Psychology

department, and all students involved in this list were offered participant pool credits for their participation.

4.2.4 Survey and questionnaires

The survey was presented online using Qualtrics and eight questionnaires were used to measure certain variables (hope, coping strategies, sources of social support, university belonging, university support, resilience, academic performance, and current adversity) by applying a comprehensive conceptual framework including individual, family, and community contexts. These instruments are detailed below.

Demographic variables

Participants were asked to report the following variables in the online survey: (gender, age, year of study, employment, moved away from home or not (see Appendix 4.5).

1-Hope

Hopes 12 Scale (Nunn, Lewin, Walton, & Carr, 1996)

Hope was measured using The Hopes 12 Scale (Nunn, 1996). This measurement of hope is used to assess individuals' personal hopefulness such as how they see the future, their goals, and activities (see Appendix 4.11). It is a self- report scale of 12 items. The responses are scored on a five-point Likert scale ranging from "0: Not at all" to "4: Extremely well, with high total scores reflecting on higher levels of hopes, and low total scores referring to lower levels of hope. Examples of the items include, I generally look forward to new activities and phases in my life, I generally believe that my future will be very active, and I generally believe that my life will be valuable and productive. It has been tested in various studies including community studies, schizophrenia studies (Carr et al., 2002), and the Australian Rural Mental Health Study (ARMHS) (Lewin, Carr, &

Webster, 1998) and found to be reliable. It has shown good internal consistency, with Cronbach alphas ranging from 0.72 to 0.88, and reported high correlations with the comparable original version Hopes- 20 scales (Nunn et al., 1996) .

2- Coping strategies

Coping Strategies Inventory Short-Form (CSI-SF) (Clifton et al., 2007)

The Coping Strategies Inventory (CSI) was developed to measure strategies used to respond to stressful events (Tobin, Holroyd, Reynolds, & Wigul, 1989) (see Appendix 4.12). The original CSI (78-items) was shortened to a 16-item version (Clifton et al., 2007) The CSI-short version was developed to reflect the original scale that represents four subscales: problem focused engagement, problem focused disengagement, emotion focused engagement, and emotion focused disengagement (Tobin et al., 1989). In the validation process of the short version of CSI one item was dropped from the CSI-SF 16. The scale used in the present chapter comprises 15-self-report items, scored on a 5 point Likert scale (1-5) when 1 = Never and 5 = Almost Always, with high scores referring to greater use of coping strategies. For example, when I am in a problem I find my way to solve it, and I try to let my emotions out. The scale was found to have a good internal consistency reliability alpha of 0.58–0.72 (Clifton et al., 2007) .

3- Sources of social support

The Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet, Dahlem, Zimet, & Farley, 1988)

The MSPSS was developed to assess the participants' opinion of social support and how they perceive it including family, friends and significant others (Zimet et al., 1988) (see Appendix 4.10 and please refer to chapter 2 page 44 for full details).

4- University belonging, and university support

University Connectedness Scale (Stallman, 2008).

The scale was developed in Australia to assess an individual's connectedness to University and has shown to be reliable among university students. It is a self- report scale of 19 items scored on a Likert scale (where 1 is Not at all and 7 is All the time) (Stallman, 2008) (see appendix 4.8). The scale includes two subscales of belonging and support. Eight items are reverse scored, and the items are not unidirectional so as to avoid response bias. The scoring criteria is as follows UCS Total Score = Sum of UCS1 – UCS19 (after items 1, 3, 5, 6, 8, 10, 12 and 13 have been reverse scored) and for the two subscales of: Support – sum of items 2, 4, 7, 9, 11, 15, 16, 17, and 18, Belonging – sum of items 1, 3, 5, 6, 8, 10, 12, 13, and 14 (Stallman, 2008). A high sum total score indicates superior University connectedness. Statements that refer to students' experiences at university including belonging such as: "I feel very different from most other students here", "I do not feel valued as a student on campus", "sometimes I don't feel as if I belong here", and support such as: "the library staff are willing to help me find materials/books, university staff have been warm and friendly". The scale was found to have a good internal consistency reliability (Stallman, 2008).

5- Resilience

The Resilience Scale (RS) 14 item (Wagnild, 2009)

The Resilience Scale (RS) was developed to assess the levels of resilience among the general population. The version (RS-14) was reduced from the original version that has 24 items (see Appendix 4.7). The shorter version of the resilience scale RS14 was derived from the original version of the resilience scale to increase the responses and reduce the burden of participants (Wagnild, 2009). The original resilience scale and the shorter version of the RS14 were found to be strongly correlated ($r=0.9$, $p>0.001$). The RS14 scale

is a self-report measure whereby individuals answer 14 items, and base their responses on the ranges from 1 (Strongly Disagree) to 7 (Strongly Agree). The responses across the items are totalled. Total scores between 82 and 98 indicate Very High Resilience Tendencies; 64 to 81 represents High Resilience Tendencies; 49 to 63 is Average; 31 to 48 indicates Low Resilience Tendencies; and 14- = to 30 suggests Very Low Resilience Tendencies. The RS14 scale has presented reliable internal consistency and external validity ranging from .89 to .96 (Wagnild, 2009). The RS14 scale demonstrated its reliability consistency with Cronbach alpha ratings of 0.8-0.91 (Wagnild, 2009).

6- Depressive symptoms

Patient Health Questionnaire 9 (PHQ-9) (Pfizer, 1999).

PHQ-9 was used to assess and measure depression and its severity, and it comprises nine items based on the DSM-V criteria for depressive symptoms (Pfizer, 1999) (see Appendix 4.14, and please refer to chapter 2 page 45 for full details).

7- Academic performance

Academic Performance (Academic Self Efficacy Scale- ASES) (Chemers, Hu, & Garcia, 2001).

Academic performance was measured using The Academic Self Efficacy Scale (Chemers et al., 2001). This measurement of self-efficacy is used to assess student's self-belief about their academic ability such as assignments, exams, and study tasks (see Appendix 4.6, and please refer to chapter 2 page 45 for full details).

4.2.5 Description of data analysis

Using the SPSS software version 21, the data were analysed at various levels using descriptive and inferential statistics, correlation, ANOVA, and multiple regression. Bivariate correlation analysis was used to explore associations between the target variables (resilience, hope, coping strategies, sources of social support, university belonging,

university support, depression and academic performance). The sample was split into three groups based on PHQ-9 score (representing the inclusion criteria), no depression (<=9), mild to moderate depression (10-14), and moderately severe to severe depression (15-27). ONEWAY ANOVAs were conducted to have an overview of study variables by comparing the means between the three depression groups.

Research questions were examined using multiple regression by adding demographic variables age, gender, year of study, moved away from home, and employment while undertaking studies in the first step and predictors variables (hope, coping strategies, sources of social support, university belonging, university support) in the second step of the models. Lastly, the significance of the findings was assessed at $p<.05$, and the sample size effect was reported.

4.2.6 Ethical considerations

This study was reviewed and approved by the School of Medicine Pharmacy & Health Ethics Committee, Durham University (Ref number: ESC2/2017/MSC01 7th March 2017) (see appendix 4.13).

1-A**nonymity and confidentiality of the data**

All information in this study was treated with a high level of confidentiality and approved by Ethics Committee ((Ref number: ESC2/2017/MSC01 7th March 2017)) as follows:

"Data was collected and stored by Qualtrics. Qualtrics complies with the U.S. and E.U. Safe Harbor Framework and the U.S.and Swiss Safe Harbor Framework as set forth by the U.S. Department of Commerce regarding the collection, use and retention of personal information from European Union member countries and Switzerland. Qualtrics has

certified that it adheres to the Safe Harbor Privacy Principles of notice, choice, onward transfer, security, data integrity, access, and enforcement. HITECH (Health Information Technology for Economic and Clinical Health Act) updated HIPAA rules to ensure that data are properly protected and best security practices followed. Qualtrics safeguards all customer data, and uses secure data centres to ensure the highest protection as per HITECH requirements.

In order to preserve anonymity of personal data the survey was split into two parts. The first survey comprised of the information sheets, initial consent procedure and presentation of the measures themselves. During this first survey participants were allocated a unique identifier code. The purpose of the second survey was to request an email address for the prize draw. At this point participants were sent an anonymous link with an authenticator (participant's unique identifier code). This ensures that the survey results and identifiable data are collected and stored separately. Data was downloaded and stored directly on the University's secure network.

2-Potential hazards, burdens and risks for participants:

The risk of participants experiencing emotional distress due to the sensitive nature of the questions was considered. To mitigate this risk participants were clearly informed of their right to withdraw at any point. In addition, a list of helplines for all participants was provided at the beginning of the survey and at the end to guide them to appropriate support if needed.

4.3 Results

4.3.1 Descriptive data

A total of 404 university students participated in this study with a mean age of 21.30 years (SD 4.67). The sample was predominantly women (62.4%, n=252), though a larger proportion of male students was recruited (36.6%, n=148) compared to Study 1. The majority of the participants were undergraduate students (80.7%, n=326), most of those students were in study year one or year two (66.6%,n=269), with age ranged between 18-21 years (73.0%, n=294). The majority of students had moved out of their home area to study at university (86.6%, n=350). Finally, the majority of the sample was not employed whilst studying at university (62.4%, n=252). Means and standard deviations of study variables are presented in Table 4.1.

Table 4.1: Means and standard deviations of study variables

Variables	Mean Scores (*M*)	Standard Deviation (SD)
Hope	43.18	10.34
Coping strategies	46.38	9.21
Social support from family	20.23	5.49
Social support from friends	20.51	6.13
Social support from significant others	20.55	6.80
University belonging	42.24	11.25
University support	45.08	8.28
Resilience	68.47	14.90
Academic performance	40.47	8.38
Depression	8.79	5.87

4.3.2 Clinical characteristics of the sample

Of the full sample, 35.2% (N=142) met the inclusion criteria for depressive symptoms. The sample was divided into 3 groups based on the depression scores as follows: no depression (PHQ-9 <=9), mild to moderate depression (PHQ-9= 10-14), and moderately severe to severe depression (PHQ-9= 15-27). Of those who met the depression inclusion criteria, 16.1% (n=65) students reported symptoms of mild to moderate levels of depression, and 19.1% (n=77) reported symptoms of moderately severe to severe levels of depression (see Table 4.2). There was no significant difference between the depression groups for gender ($\chi 2$ (2) =1.341, p=.957), year of study ($\chi 2$ (2) =13.412, p=.237), moved away from home ($\chi 2$ (2) =1.309, p=.455), and age t(150)=.244,p=.621). The only significant difference between groups was employment while undertaking studies ($\chi 2$ (2)

=1.377, p=.005) with employed students being more depressed. Within the full sample, women students had significantly higher levels of social support from family (F(4.127)=.398,p=.001), (M=20.99, SD=5.58) and significant others (F(0,327)=.398, p=.035), (M = 21.12, SD =6.62) than men students (social support from support (M = 19.14, SD=5.06), and social support from significant others (M=19.64, SD=6.96).

Women students had significantly higher mean scores on The Coping Strategies Scale (M=19.2, SD=7.20,) compared to men students (M=11, SD=4.22), t(48)=8.37, p=.000). Students who had not moved away from their home area had significantly higher mean scores on resilience and social support from significant others than those who moved away from their home area. Finally students employed whilst studying at university had significantly higher mean scores on resilience, hope, coping strategies, university belonging, university and staff support, social support from friends and significant others, and academic adjustment (academic performance) than those unemployed whiles studying at university.

Table 4.2: Clinical Characteristics of the sample based on depression groups

Variable	No depression (n= 262)	Mild to Moderate depression (n= 65)	Moderately Severe to Severe depression (n= 77)
Gender (Women)	64.3%	16.7%	19.0%
Age (years)	59.7%	17.7%	22.6%
18-19	65.7%	13.9%	20.4%
20-21	66.7%	16.7%	16.7%
22-23	76.1%	14.9%	9.0%
24-51	59.4%	17.6%	22.9%
Year of study (undergraduate)	61.6%	20.2%	18.2%
First Year 1	74.0%	8.0%	18.0%
Second Year 2	85.7%	-	14.3%
Third Year 3	74.7%	13.3 %	12.0%
Fourth Year 4	64.3%	15.7%	20.0%
Postgrad	68.5%	18.5%	13.0%
Moved away from home	74.3%	9.9%	15.8%
Yes	59.1%	19.8%	21.0%
No			
Employed			
Yes			
No			

4.3.3 Comparison of depression groups by promotive factors

Hope

Results of a one-way ANOVA showed significant differences between the depression 3 groups for hope, F(2,401)=171.97, p=.000.(Table 3). A post hoc Tukey HDS test revealed that the no depression group had significantly higher hope scores than the mild to moderate depression group at p=0.05. Also, the no depression group had significantly higher hope scores than the moderately severe to severe depression group at p=0.05. Finally, there was a significant difference between the mild to moderate depression group and the moderately severe to severe depression group for the hope scale at p≤0.05 (see Table 4.3, Figure 4.1).

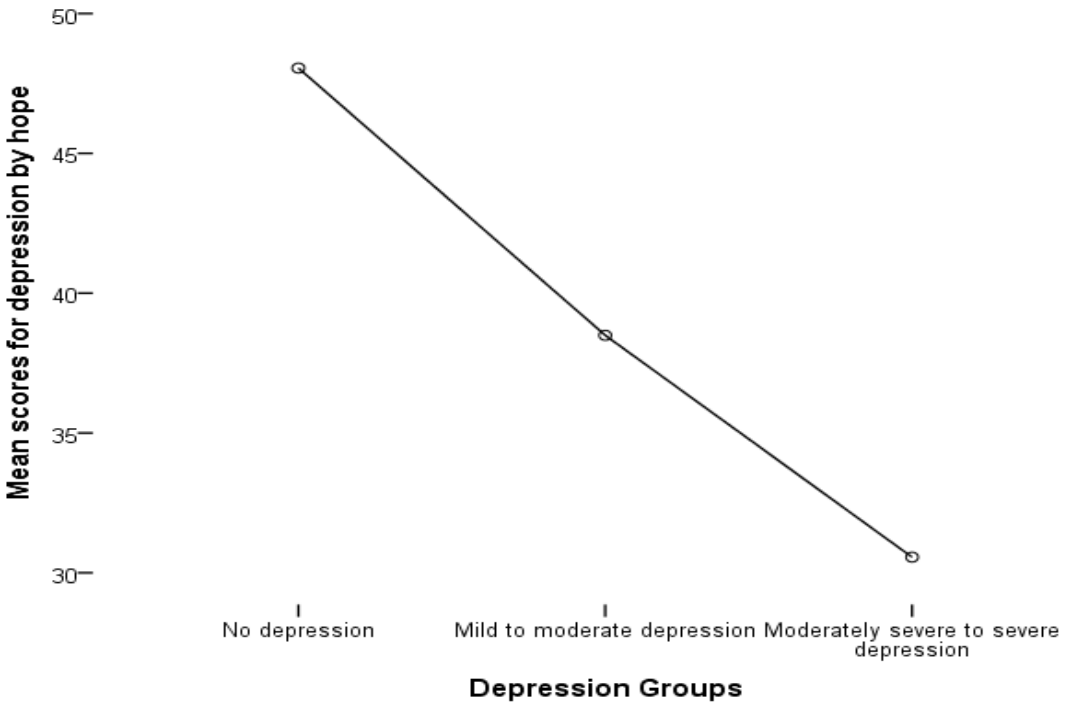

Figure 4.1: Mean scores comparison for depression groups by hope

Coping strategies

Results of a one-way ANOVA showed significant differences between the depression groups for coping strategies F(2,392)=57.61, p=.000.(Table 3). A post hoc Tukey HDS test revealed that the no depression group had significantly higher coping strategies scores than the mild to moderate depression group at p=0.05. Also, the no depression group had significantly higher coping strategies scores than the moderately severe to severe depression group at p=0.05. Finally, there was a significant difference between the mild to moderate depression group and the moderately severe to severe depression group for the coping strategies scale at p=0.05 (see Table 4.3, Figure 4.2).

Figure 4.2: Mean scores comparison for depression groups by coping strategies

Social support from family

Results of a one-way ANOVA showed significant differences between the depression groups for social support from family: F(2,401)=28.01, p=.000. A post hoc Tukey HDS test revealed that the no depression group had significantly higher social support from family scores than the moderately severe to severe depression group at p=0.05. Also, the mild to moderate depression group had significantly higher social support from family scores than the moderately severe to severe depression group at p=0.05. (Table 4.3, Figure 4.3).

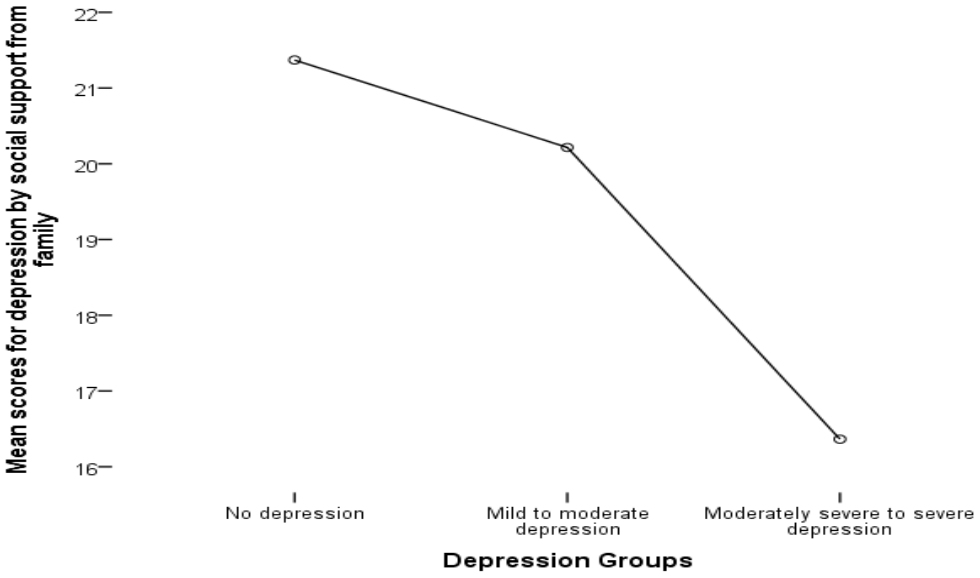

Figure 4.3: Mean scores comparison for depression groups by family support

Social support from friends and social support from significant others

Results of a one-way ANOVA showed significant differences between the depression groups for social support from significant others F(2,401)=47.75, p=.000., and social support from friends F(2,401)=68.51, p=.000. A post hoc Tukey HDS test revealed that the no depression group had significantly higher mean scores than the mild to moderate depression group on both subscales of social support (significant others, friends) at p=0.05.

Also, the no depression group had significantly higher scores than the moderately severe to severe depression group on both social support subscales (significant others, friends) at p=0.05) p ≤ .000*. Finally, there was a significant difference between the mild to moderate depression group and the moderately severe to severe depression group for the social support from friends and significant others at p=0.05 p ≥.003* (see Table 4.3, Figure 4.4, Figure 4.5).

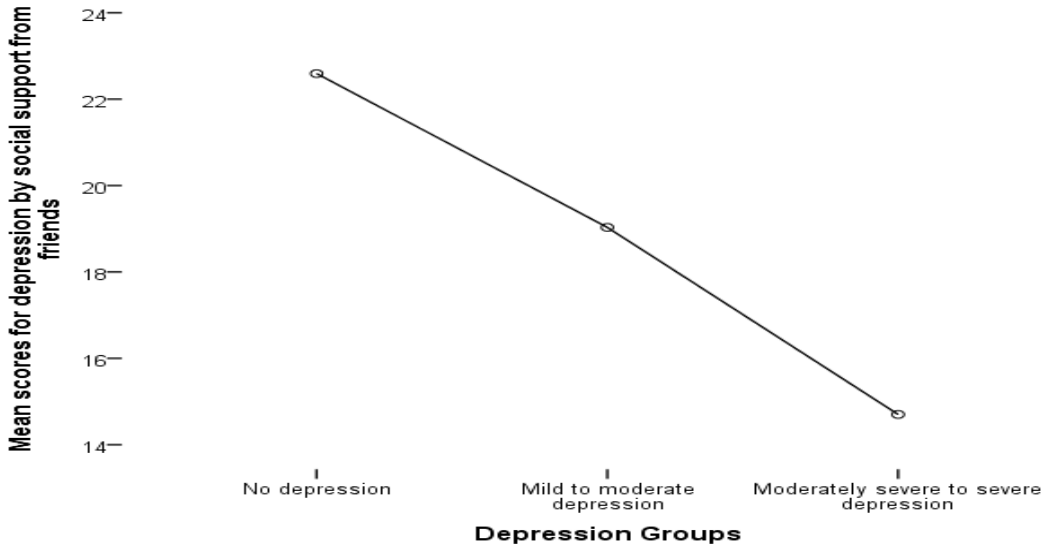

Figure 4.4: Mean scores comparison for depression groups by friends support

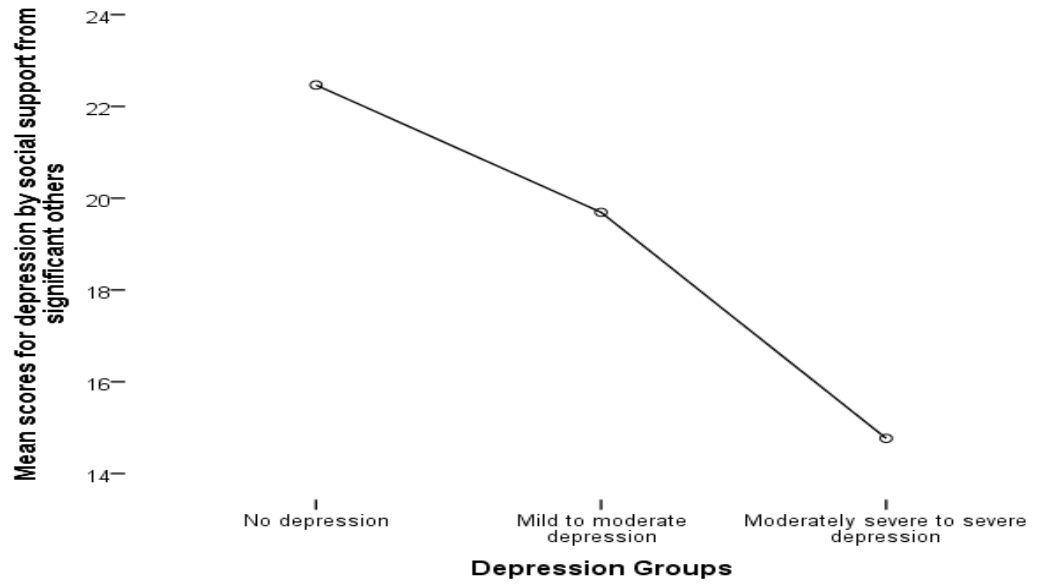

Figure 4.5: Mean scores comparison for depression groups by significant others support

University belonging

Results of a one-way ANOVA showed significant differences between the depression groups for university belonging subscale F(2,396)=108.83, p=.000. A post hoc Tukey HDS test revealed that the no depression group had significantly higher university belonging scores than the mild to moderate depression group in university belonging at p=0.05. Also, the no depression group had significantly higher university belonging scores than the moderately severe to severe depression group at p=0.05. Finally, there was a significant difference between the mild to moderate depression group and the moderately severe to severe depression group for the university belonging subscale at p=0.05 (see Table 4.3, Figure 4.6).

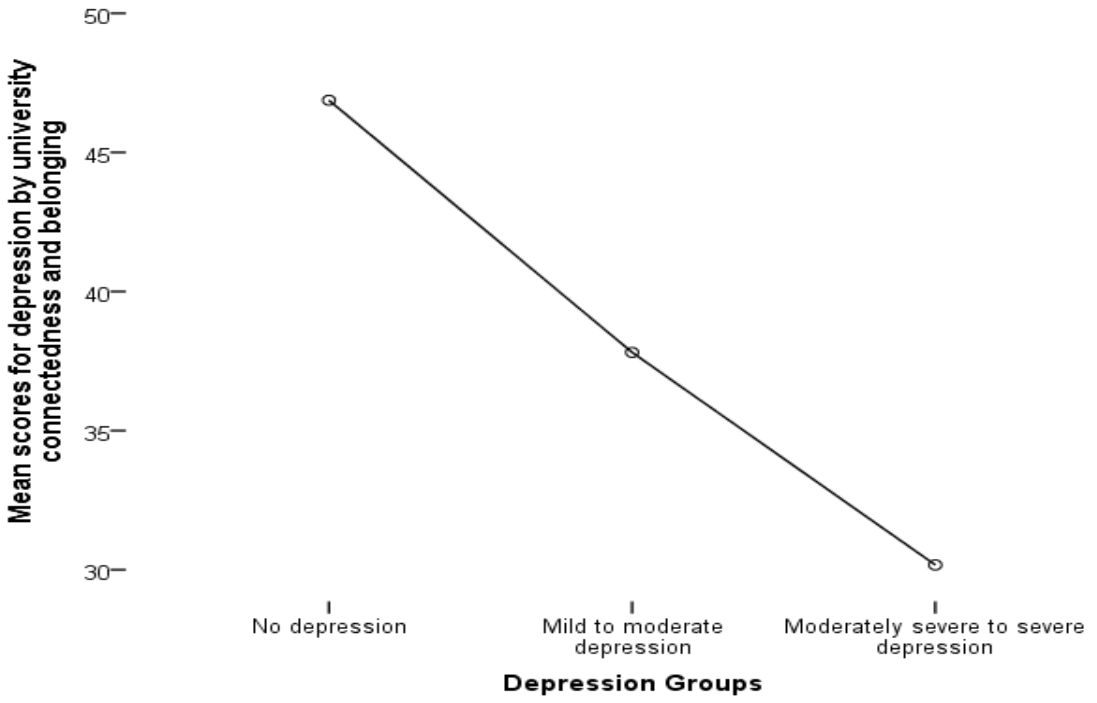

Figure 4.6: Mean scores comparison for depression groups by university belonging

University support

Results of a one-way ANOVA showed significant differences between the depression groups for university and staff support subscale F(2,395)=66.92 p=.000 (Table 3). A post hoc Tukey HDS test revealed that the no depression group had significantly higher university and staff support scores than the mild to moderate depression group at p=0.05. Also, the no depression group had significantly higher university support scores than the moderately severe to severe depression group at p=0.05. Finally, there was a significant difference between the mild to moderate depression group and the moderately severe to severe depression group for the university support subscale at p=0.05 (see Table 4.3, Figure 4.7).

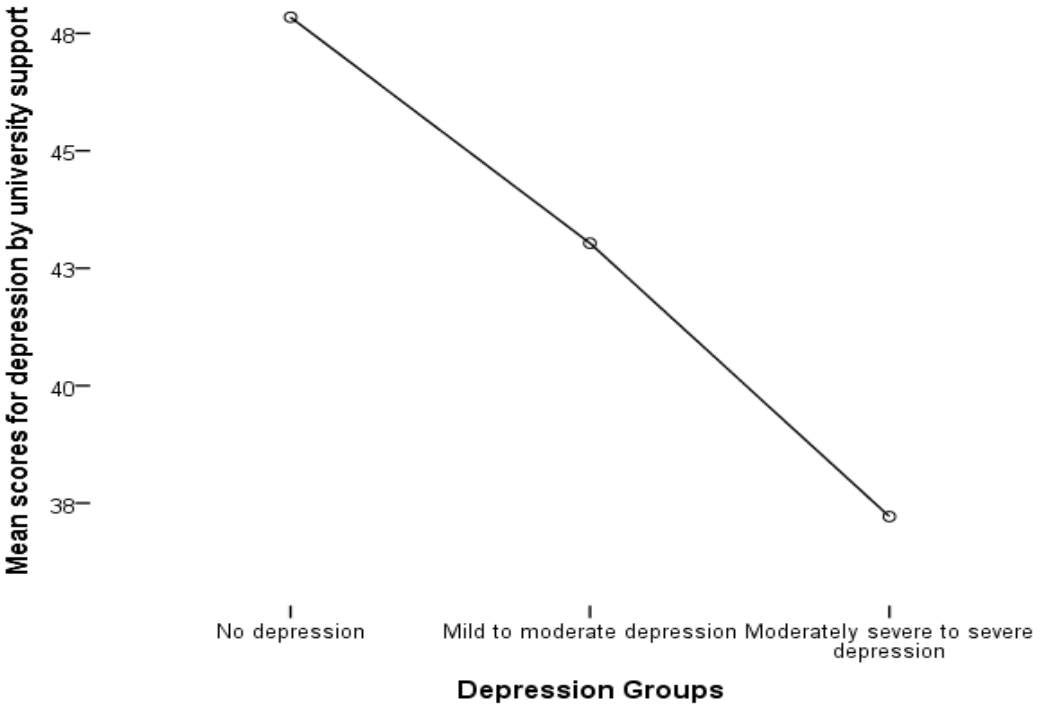

Figure 4.7: Mean scores comparison for depression groups by university support

Resilience

Results of a one-way ANOVA showed significant differences between the depression groups for resilience, F(2,401)=97.65, p=.000. A post hoc Tukey HDS test revealed that the no depression group had significantly higher resilience scores than the mild to moderate depression group at p=0.05. Also, the no depression group had significantly higher resilience scores than the moderately severe to severe depression group at p=0.05. Finally, there was a significant difference between the mild to moderate depression group and the moderately severe to severe depression group for the resilience scale at p=0.05 (see Table 4.3, Figure 4.8).

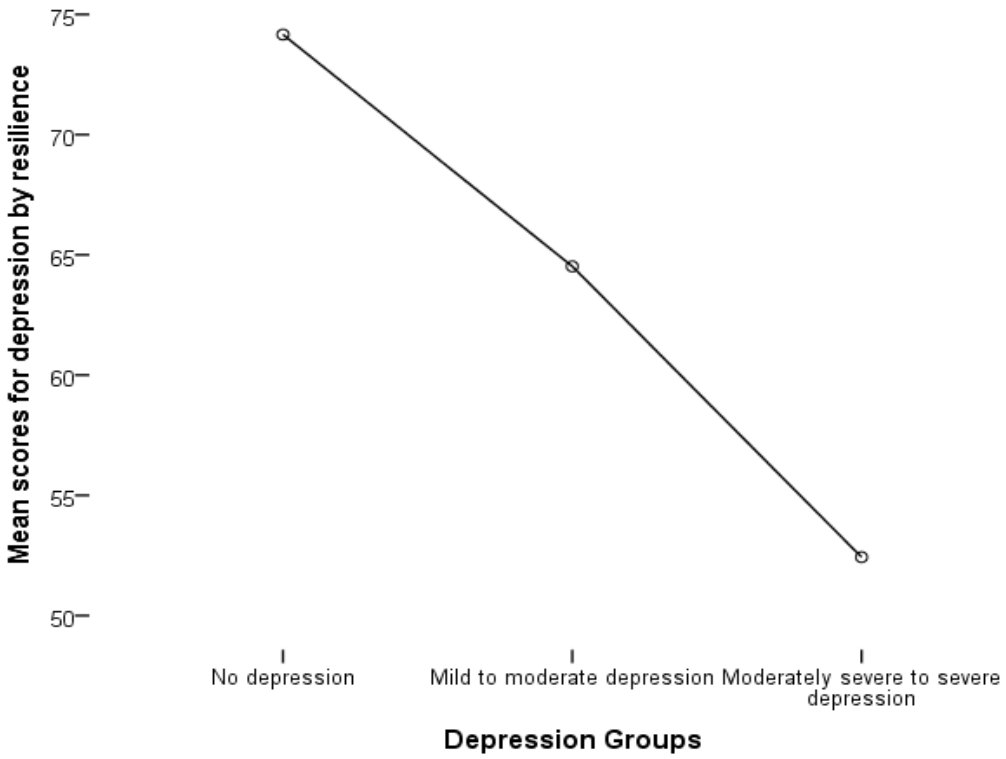

Figure 4.8: Mean scores comparison for depression groups by resilience

Academic performance

Results of a one-way ANOVA showed significant differences between the depression groups for academic performance, F(2,401)=68.49, p=.000. A post hoc Tukey HDS test revealed that the no depression group had significantly higher academic performance scores than the mild to moderate depression group at p=0.05. Also, the no depression group had significantly higher academic performance scores than the moderately severe to severe depression group at p=0.05. Finally, there was a significant difference between the mild to moderate depression group and the moderately severe to severe depression group for the academic performance scale at p=0.05 (see Table 4.3, Figure 4.9).

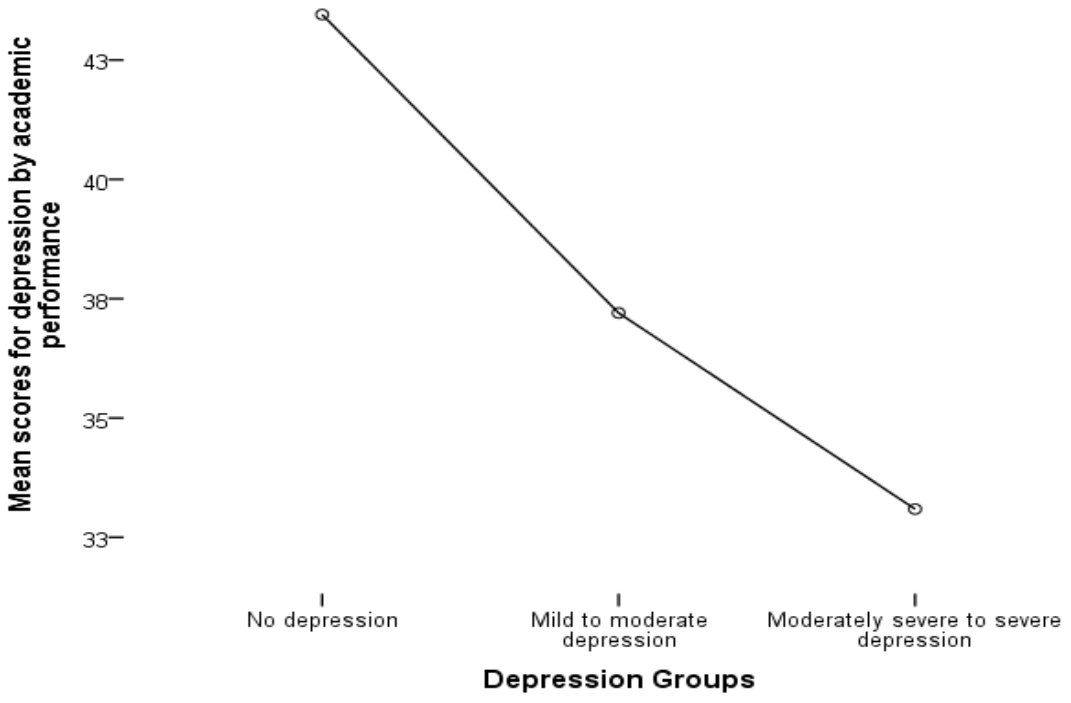

Figure 4.9: Mean scores comparison for depression groups by academic performance

Table 4.3: Mean scores comparison for depression groups by promotive factors

Variable	No depression group (1)	Mild to Moderate depression group (2)	Moderately Severe to Severe group (3)	P-Value	Comparison Groups	Post Hoc Test
Hope	*M*=48.05 (SD 7.27)	*M*=38.49 (SD 7.89)	*M*= 30.56 SD=(8.43)	.000*	1 VS 2	.000*
					1 VS 3	.000*
					2 VS 3	.000*
Coping strategies	*M*=49.44 (SD 8.55)	*M*=43.40 (SD 6.92)	*M*=42.16 (SD 7.48)	.000*	1 VS 2	.000*
					1 VS 3	.000*
					2 VS 3	.002*
Family support	*M*=21.37 (SD 5.12)	*M*=20.22 (SD 5.97)	*M*=16.36 (SD 4.49)	.000*	1 VS 2	.240
					1 VS 3	.000*
					2 VS 3	.000*
Friends support	*M*=22.59 (SD 5.09)	*M*=19.03 (SD 5.60)	*M*=14.70 (SD 5.98)	.000*	1 VS 2	.000*
					1 VS 3	.000*
					2 VS 3	.000*
Significant others support	*M*=22.47 (SD 5.57)	*M*=19.69 (SD 6.55)	*M*=14.77 (SD 6.43)	.000*	1 VS 2	.003*
					1 VS 3	.000*
					2 VS 3	.000*

University belonging	*M*=46.88 (SD 9.20)	*M*=37.81 (SD 9.40)	*M*=30.17 (SD=8.26)	.000*	1 VS 2	.000*
					1 VS 3	.000*
					2 VS 3	.000*
University support	*M*=47.84 (SD 6.99)	*M*=43.03 (SD 7.42)	*M*=37.21 (SD 7.58)	.000*	1 VS 2	.000*
					1 VS 3	.000*
					2 VS 3	.000*
Resilience	*M*=74.16 (SD 11.82)	*M*=64.52 (SD 11.47)	*M*=52.43 (SD 14.18)	.000*	1 VS 2	.000*
					1 VS 3	.000*
					2 VS 3	.000*
Academic performance	*M*=43.45 (SD 6.87)	*M*=37.20 (SD 7.65)	*M*=33.09 (SD 8.15)	.000*	1 VS 2	.000*
					1 VS 3	.000*
					2 VS 3	.002*

4.3.4 Predictors of resilience and social and emotional wellbeing

A bivariate correlation analysis was performed on the full sample between the study variables before testing the study hypotheses (see Table 4.4). There were significant positive relationships between all the following variables: hope, coping strategies, social support from family, social support from friends, social support from significant others, university belonging, university support, resilience and academic adjustment (academic performance) (see Table 4.4). Finally, depressive symptoms had a significant negative relationship with hope, coping strategies, social support from family, social support from

friends, social support from significant others, university belonging, university support, resilience and academic adjustment (academic performance) (see Table 4.4).

Table 4.4: Correlations of promotive factors and social and emotional wellbeing

Variables	1	2	3	4	5	6	7	8	9	10
1. Hope	-									
2.Coping strategies	.632**	-								
3. Support (Family)	.448**	.325**	-							
4. Support (Friends)	.663**	.654**	.485**	-						
5. Support (Significant others)	.513**	.540**	.533**	.366**	-					
6. University belonging	.714**	.504**	.309**	.594**	.408**	-				
7. University support	.630**	.530**	.313**	.538**	.413**	.709**	-			
8. Resilience	.736**	.579**	.368**	.574**	.515**	.565**	.587**	-		
9. Academic performance	.606**	.403**	.318**	.443**	.400**	.579**	.603**	.612**	-	
10. Depressive symptoms	-.720**	-.512**	-.375**	-.544**	-.463**	-.616**	-.534**	-.601**	-.510**	-

** Significant at the 0.05 level * Significant at the 0.01 level

4.3.5 Hypotheses being tested

To test the hypotheses, three models were performed using multiple hierarchical regressions. Model one included hope, coping strategies, sources of social support, university belonging, and university support to predict resilience. Model two included hope, coping strategies, sources of social support, university belonging, and university support to predict depressive symptoms. And finally, model three included hope, coping strategies, sources of social support, university belonging, and university support to predict academic performance. In the first step for all models only the demographic variables of age, gender, year of study, moved away from home, and employment were added as predictor variables. In the second step for all models hope and coping strategies were added, controlling for the demographic variables in the previous step. In the third step social support from family was added, and in the fourth step the rest of sources of social support (friends, significant other), university belonging, and university support were added. Prior to performing the hierarchical multiple regressions, the normality of all datasets was tested. Results from both skewness and kurtosis showed that all values fell within the acceptable range of -1.0 to 1.0. Considering multicollinearity diagnosis, tolerance was found to be greater than .10, and the variance inflation factor was found to be less than 10 suggesting that multicollinearity was not an issue.

4.3.6 Promotive factors as predictors of resilience

Hypothesis 1: It was hypothesised that hope and coping strategies will be significant predictors of increased levels of resilience.

Hypothesis 2: It was hypothesised that social support from family will be a significant predictor of increased levels of resilience.

Hypothesis 3: It was hypothesised that social support from friends, social support from significant others, university belonging and university support will be significant predictors of increased levels of resilience.

Results of the first model (1) that included hope, coping strategies, sources of social support, university belonging, and university support as predictors of resilience (outcome) showed that the model was significant at the first step F(5,019)=5.37, p=.000, and at step 2 F(226,982)=2.37, p=.000, but was not significant at step 3 F(.484)=1.37, .p=.487, and was significant at step four F(5,717)=4.37, p=.000 (see Table 4.5). Gender, age, year of study, and moved away from home were not significant predictors of resilience, while employment while undertaking studies was the only significant predictor of resilience in the first step. In the second step of the model, employment while undertaking studies was no longer a significant predictor while gender at this step became a significant predictor of resilience. Furthermore, hope and coping strategies were significant predictors of increased levels of resilience. The change in R2 at the second step showed that hope and coping strategies accounted for 5.12% of the variance in resilience (see Table 4.5). In the third step of the model gender at this step was still the only significant predictor of resilience from demographic variables. Moreover, hope and coping strategies were the only significant predictors of increased levels of resilience at this step. The change in R2 at the third step remained similar to the previous step by only .01% (see Table 4.5). In the final

step of the model, gender was not a significant predictor of resilience anymore from demographic variables. Furthermore, after the addition of the sources of social support, university belonging, and university support in this step, hope, coping strategies, social support from significant others, university belonging and university support were the only significant predictors of increased levels resilience. The change in R2 at the final step showed that social support from significant others, university belonging, and university support accounted for 0.25% of the variance in resilience (see Table 4.5).

Table 4.5: Promotive factors as predictors of resilience (Hierarchical Multiple Regression)

	Resilience							
Variable	**Unadjusted R^2**	**Adjusted R^2**	**ΔR^2**	**B**	**SE B**	**βStandardised**	**f^2**	**P-Value**
Model 1 (Step 1)	.020	.009	.016					.000
Gender				.724	.702	.049	.000	.665
Age				.241	.103	.140		.305
Year of study				-.402-	.288	-.079-		.988
Moved away from home				-2.186-	1.059	-.2.065-		.510
Employed				-.544-	.628	-.042-		.000
Step 2	.082	.070	.062					.000
Gender				.984	.681	.067		.032
Age				.166	.101	.096		.480
Year of study				.-.254-	.280	-.050-		.808
Moved away from home				-2.130-	1.026	-.103-		.429
Employed				-.350-	.609	-.027-		.177

Hope				1.482	.273	.253	.000
Coping strategies				.765	.341	.542	.000
Step 3	.177	.164	.095				.487
Gender				.842	.646	.057	.049
Age				.133	.096	.077	.461
Year of study				-.251-	.266	-.050-	.809
Moved away from home				-2.032-	.972	-.098-	.478
Employed				-.432-	.578	-.034-	.145
Hope				.735	.466	.342	.000
Coping strategies				1.742	.546	.149	.000
Family support				1.215	.172	.326	.487
Step 4	.292	.276	.115				.000
Gender				1.275	.605	.086	.149
Age				.098	.090	.057	.520
Year of study				-.263-	.248	-.052-	.531

Moved away from home	-1.877-	.912	-.090-	.662
Employed	-.325-	.538	-.025-	.345
Hope	.785	.547	.067	.000
Coping strategies	1.034	.161	.278	.036
Family support	.534	.323	.199	.499
Friends Support	-.163-	.064	-.231-	.841
Significant others	-.151-	.047	-.154-	.007
University belonging	-.290-	.051	-.258-	.796
University support	-.030-	.043	-.031-	.001

*Significant at the 0.05 level.

4.3.7 Promotive factors as predictors of depressive symptoms

Hypothesis 1: It was hypothesised that lack of hope and coping strategies will be significant predictors of increased levels depressive symptoms.

Hypothesis 2: It was hypothesised that lack of social support from family will be a significant predictor of increased levels of depressive symptoms.

Hypothesis 3: It was hypothesised that lack of social support from friends, social support from significant others, university belonging and university support will be significant predictors of increased levels of depressive symptoms.

Results of the second model (2) that included hope, coping strategies, sources of social support, university belonging, and university support as predictors of depressive symptoms (outcome) showed that the model was significant at the first step F(4,301)=5.37, p=.001, and at step 2 F(211,432)=2.37, p=.000, but was not significant at step 3 F(2.740)=1.37, .p=.099, and was significant at step four F(5,947)=4.37, p=.000 (see Table 4.6). Gender, age, and moved away from home were not significant predictors of depressive symptoms, while year of study and employment while undertaking studies were the only significant predictors of depressive symptoms in the first step. In the second step of the model, employment while undertaking studies was no longer a significant predictor while and year of study at this step was the only significant predictor of depressive symptoms from demographic variables. Furthermore, lack of hope and coping strategies were significant predictors of increased levels of depressive symptoms. The change in R2 at the second step showed that hope and coping strategies accounted for 5% of the variance in depressive symptoms (see Table 4.6). In the third step of the model year of study was the only significant predictor of depressive symptoms out of the demographic variables. Moreover, lack of hope and coping strategies were the only significant predictors of

increased levels of depressive symptoms at this step. The change in R2 at the third step still similar to the previous step by only .03% (see Table 4.6). In the final step of the model, year of study was the only significant predictor of depressive symptoms out of the demographic variables. Furthermore, after the addition of the sources of social support, university belonging and university support in this step, lack of hope, social support from significant others, and university belonging were the only significant predictors of increased levels of depressive symptoms. The change in R2 at the final step showed that social support from significant others, and university belonging accounted for 0.27% of the variance in depressive symptoms (see Table 4.6).

Table 4.6: Promotive factors as predictors of depression (Hierarchical Multiple Regression)

	Depressive Symptoms							
Variable	**Unadjusted R^2**	**Adjusted R^2**	**ΔR^2**	**B**	**SE B**	**βStandardised**	**f^2**	**P-Value**
Model 1 (Step 1)	.025	.010	.019					.000
Gender				.524	.702	.079	.000	.899
Age				.343	.223	.155		.396
Year of study				-.455-	.275	-.088-		.023
Moved away from home				-2.186-	1.059	-.2.065-		.755
Employed				-.544-	.628	-.042-		.008
Step 2	.072	.060	.077					.000
Gender				.887	.481	.086		.245
Age				.261	.153	.078		.754
Year of study				-.254-	.280	-.050-		.002
Moved away from home				-2.130-	1.026	-.103-		.550
Employed				-.350-	.609	-.027-		.463

Hope				1.482	.273	.253	.000
Coping strategies				.765	.341	.542	.008
Step 3	.287	.434	.055				.099
Gender				.347	.846	.077	.415
Age				.333	.066	.087	.696
Year of study				-.251-	.266	-.050-	.002
Moved away from home				-2.032-	.972	-.098-	.438
Employed				-.432-	.578	-.034-	.686
Hope				.735	.466	.342	.000
Coping strategies				1.742	.546	.149	.013
Family support				1.215	.172	.326	.099
Step 4	.195	.636	.225				.000
Gender				1.342	.654	.067	.837
Age				.065	.086	.074	.541
Year of study				-.263-	.248	-.052-	.005

Moved away from home	-1.877-	.912	-.090-	.317
Employed	-.325-	.538	-.025-	.354
Hope	.785	.547	.067	.000
Coping strategies	1.034	.161	.278	.234
Family support	.534	.323	.199	.444
Friends Support	-.163-	.064	-.231-	.891
Significant others	-.151-	.047	-.154-	.029
University belonging	-.290-	.051	-.258-	.001
University support	-.030-	.043	-.031-	.612

*Significant at the 0.05 level.

4.3.8 Promotive factors as predictors of academic performance

Hypothesis 1: It was hypothesised that hope and coping strategies will be significant predictors of better academic performance.

Hypothesis 2: It was hypothesised that social support from family will be a significant predictor of better academic performance.

Hypothesis 3: It was hypothesised that social support from friends, social support from significant others, university belonging and university support will be significant predictors of better academic performance.

Results of the second model (2) that included hope, coping strategies, sources of social support, university belonging, and university support as predictors of academic performance (outcome) showed that the model was significant at the first step F(7,451)=5.37, p=.000, and at step 2 F(94,557)=2.37, p=.000, but was not significant at step 3 F(2.242)=1.37, .p=.135, and was significant at step four F(16,521)=4.37, p=.000 (see Table 4.7). Gender, age, and moved away from home were not significant predictors of academic performance, while year of study and employment while undertaking studies were the only significant predictors of academic performance in the first step. In the second step of the model, employment while undertaking studies and year of study at this step were still the only significant predictor of academic performance out of the demographic variables. Furthermore, hope was a significant predictor of better academic performance. The change in R2 at the second step showed that hope is accounted for 3.04% of the variance in academic performance (see Table 4.7). In the third step of the model employment while undertaking studies and year of study at this step were the only significant predictors of academic performance out of the demographic variables. Moreover, hope was the only significant predictor of better academic performance at this

step. The change in R2 at the third step still similar to the previous step with a slight change by only .04% (see Table 4.7). In the final step of the model, employment while undertaking studies, year of study and age were the only significant predictors of academic performance out of the demographic variables. Furthermore, after the addition of the sources of social support, university belonging and university support in this step, hope, university belonging and university support were the only significant predictors of better academic performance. The change in R2 at the final step showed that university belonging and university support accounted for 0.91% of the variance in academic performance (see Table 4.7).

Table 4.7: Promotive factors as predictors of academic performance (Hierarchical Multiple Regression)

	Academic Performance							
Variable	**Unadjusted R^2**	**Adjusted R^2**	**ΔR^2**	**B**	**SE B**	**βStandardised**	**f^2**	**P-Value**
Model 1 (Step 1)	.043	.006	.017					.000
Gender				.653	.687	.054	.000	.776
Age				.142	.213	.312		.531
Year of study				-.402-	.288	-.079-		.002
Moved away from home				-2.186-	1.059	-.2.065-		.838
Employed				-.544-	.628	-.042-		.000
Step 2	.077	.056	.071					.000
Gender				.876	.564	.075		.251
Age				.173	.213	.082		.141
Year of study				.-.254-	.280	-.050-		.000
Moved away from home				-2.130-	1.026	-.103-		.750

Employed				-.350-	.609	-.027-	.013
Hope				1.482	.273	.253	.000
Coping strategies				.765	.341	.542	.469
Step 3	.138	.211	.088				.135
Gender				.752	.552	.066	.405
Age				.277	.083	.071	.160
Year of study				-.251-	.266	-.050-	.000
Moved away from home				-2.032-	.972	-.098-	.630
Employed				-.432-	.578	-.034-	.007
Hope				.735	.466	.342	.000
Coping strategies				1.742	.546	.149	.563
Family support				1.215	.172	.326	.136
Step 4	.335	.188	.213				.000
Gender				1.556	.743	.068	.507
Age				.088	.075	.085	.040
Year of study				-.263-	.248	-.052-	.000

Moved away from home	-1.877-	.912	-.090-	.569
Employed	-.325-	.538	-.025-	.021
Hope	.785	.547	.067	.000
Coping strategies	1.034	.161	.278	.443
Family support	.534	.323	.199	.315
Friends Support	-.163-	.064	-.231-	.152
Significant others	-.151-	.047	-.154-	.107
University belonging	-.290-	.051	-.258-	.010
University support	-.030-	.043	-.031-	.000

*Significant at the 0.05 level.

4.4 Discussion

4.4.1 Prevalence of depression

The aim of this study was to examine promotive factors of resilience, wellbeing and adjustment among university students by implementing a comprehensive framework of three multidimensional contexts, including the individual (hope, coping strategies), family (social support from family) and community levels (university belonging, university support, social support from friends and social support from significant others). The results of this study revealed that the prevalence of depressive symptoms was 35.2%, which is comparable to previous trends reported in the literature (Ibrahim, Kelly, Adams, & Glazebrook, 2013; Othieno, Okoth, Peltzer, Pengpid, & Malla, 2014). The slight increase in the rates of depression prevalence in this study compared to Study 1 of this thesis might be accounted for by the variations in the sample recruited in terms of gender and departments. For example, the percentage of male students increased compared to Study 1, and the representation of other departments alongside Psychology was increased. Of those who met the depression inclusion criteria in the present study (cut-off score of 10 on PHQ-9), 16.1% of university students reported symptoms of mild to moderate levels of depression, and 19.1% reported symptoms of moderately severe to severe levels of depression. These findings are higher than the 4% to 6% prevalence rates reported in the literature (Asante & Arthur, 2015; Chen et al., 2013; Othieno et al., 2014), which may be due to the differences in depression categories used by these studies, Also a high number of participants was women students and previous studies showed that female participants show higher prevalence rates of depression than men (Ibrahim et al., 2013). Durham University being a member of the Russell Group universities puts more pressure on students might explain also this variation as will be discussed in detail in chapter 5 (Brown, 2016).

4.4.2 Predictors of resilience, and social and emotional wellbeing

4.4.3 Promotive factors at the individual level

4.4.3.1 Hope

Hope has a significant positive influence on resilience, adjustment, mental health and academic outcomes (Lopez et al., 2009). In support of the first hypothesis (that promotive factors would be a significant predictor of increased levels of resilience), the present study found that hope had a significant positive relationship with and was a significant predictor of increased levels of resilience. Consistent with the study findings, previous studies in the literature revealed similar results (Kirmani, Sharma, Anas, & Sanam, 2015; Ong et al., 2006). This is a likely finding, given that the experience of hope for individuals induces positive outcomes throughout the lifespan, and may increase resilience in students. In turn, a lack of hope is linked to lower levels of resilience, induces negative consequences and poorer adjustment (Ong et al., 2006). It appears that hopefulness might be a possible mechanism of adaption, inducing greater levels of resilience. For example, in the case of stress at the university level, if students have hope by seeing future directions, setting clear goals and continuing to work to achieve them, then such students might be more prone to recommence the typical level of functioning they had before or after the experience of this transition. This mechanism of adaption may increase the potential of having greater levels of resilience and developing positive and thoughts of worth and power, thus increasing vulnerability to adjust and succeed in university life. Hopefulness relies on goal-oriented thinking, consists of the capability to ascertain expressive goals and also resolve problems efficiently to reach those goals (Rand & Cheavens, 2009). In this manner, it is proposed that hope facilitates positive goal-oriented thinking such that individuals who experience greater levels of hope are prone to

forming directions that lead to successful adaption and positive outcomes (Rand & Cheavens, 2009). Indeed, it is crucial for students to have levels of hope that are represented by two elements: agency, which is the capability to classify goals, and pathways, which is the ability to solve problems, leading to the achievement of targeted goals (Du & King, 2013). The use of such constructs is an essential approach in the field of positive psychology and is regarded as a promotive factor of resilience and adjustment during and after transitions, which may in part explain why hopefulness induces resilience (Du & King, 2013).

In support of the third hypothesis (that promotive factors will be a significant predictor of better university student adjustment (academic performance), findings from this study revealed that hope was a significant predictor of, and had a significant positive relationship with, better academic performance. Evidence from the literature report similar results among university students and young age groups (Feldman & Kubota, 2015; Gallagher, Marques, & Lopez, 2017; Snyder et al., 2002). This may be due to having a clear direction with short- and long-term plans, and setting goals that lead in this direction with positive-oriented thinking will create ease in working on academic tasks, thus increasing academic performance and positive outcomes. According to Snyder's model, hope endorses students to identify valuable goals pertaining to what they believe, to develop particular approaches to achieve those beliefs and to discover the enthusiasm to follow those goals (Snyder, 1995). There is substantial to support this model by demonstrating significant associations between hope and several aspects of students' lives comprising academic performance and effective problem-solving capabilities (Gallagher et al., 2017; Lopez et al., 2009; Snyder et al., 2002). This suggests that greater levels of hope induce better academic outcomes and more successful adjustment among university students.

Lack of hope also has a significant negative impact on depressive symptoms in youth (Du, King, & Chu, 2016). The results of the present study support the second hypothesis (that lack of promotive factors would be a significant predictor of increased levels of depression) and showed that hope had a significant negative relationship with and was a significant predictor of increased levels of depressive symptoms. These findings are consistent with the previous literature (Du et al., 2016; Li, Wang, Mao, & Yin, 2018). This might be explained by the hope theory proposed by Snyder specifically pathway thinking. Pathway thinking proposes that individuals have particular purposes and ideas in the tracking down their goals, and is a cognitive element of hope thus lack of such ways of thinking may induce negative outcomes (Snyder, 1995). Regardless, when individuals lack clear goals or the formation of particular pathways by which to attain such goals, their depressive symptoms have a tendency to upsurge. Furthermore, when individuals encounter elevated levels of depressive symptoms, they are less motivated to implement pathway thinking and thus may develop feelings of uselessness. It is likely that characteristics of hope might aid students in coping with psychological issues efficiently thereby increasing involvement in healthier activities.

4.4.3.2 Coping strategies

Coping strategies have a substantial positive impact on resilience, wellbeing and academic outcomes. Findings from this study support the first hypothesis (that promotive factors will be a significant predictor increased levels of of resilience), and revealed that coping strategies had a significant positive relationship with, and were a significant predictor of increased levels of resilience. Consistent evidence in the literature found comparable results of the current study (Campbell-Sills, Cohan, & Stein, 2006; Lee et al., 2017). This may be explained in accordance with Lazarus and Folkman (1984) theory of stress and coping by elements of coping strategies, such as problem-focused emotions that

increase resilience levels and result in successful adjustment. The development of such coping strategies by individuals helps in assembling means to endorse elevated levels of adaption to university in an active way, therefore students become more resilient. In contrast, the use of avoidance coping strategies, such as mental distraction, may reduce the ability to deal with the conditions of the transition (Lazarus & Folkman, 1984). Active coping strategies are considered a characteristic of self-regulation in a particular task, whereas avoidance and emotion coping strategies entice resources away from adjustment and successful adaption (Gaudreau, Nicholls, & Levy, 2010). This suggests that the implementation of active coping strategies by students may lead to greater resilience levels than others who do not use such strategies. Therefore, endorsing the use of those strategies is essential for individuals, especially during transition periods.

Similarly, results from this study support the third hypothesis (that promotive factors would be a significant predictor of better university students' adjustment), and showed that coping strategies had a significant positive relationship with increased levels of academic performance. In this respect, consistent comparable findings in the literature revealed similar results among university students (de la Fuente et al., 2017; Thomas, Cassady, & Heller, 2017). This might be explained by the fact that studying at the university level is demanding and the workload increasingly requires more effort and time to meet learning standards. Such academic demands include additional academic writing, projects, assignments, exams and research papers. Therefore, when students encounter such a significant workload, they need to implement coping strategies that keep them focused and follow academic tasks successfully. Thus, the use of active coping strategies, such as problem-focused coping, is essential to taking actions to meet these demands. For example, such strategies as organising student work and having a clear suitable plan to

achieve a better academic performance and increase successful adjustment to university demands will aid in better cognitive function.

A lack of coping strategies has also been shown to be linked with and to have a negative impact on depressive symptoms. The present study findings support the second hypothesis (that lack of promotive factors would be a significant predictor of increased levels of depression), and showed that coping strategies had a significant negative relationship with and (lack of such source) were a significant predictor of increased levels of depressive symptoms. Similar consistent findings have been reported in the literature (Atindanbila & Abasimi, 2011; Morton et al., 2014). This may be because depression is one of the most common mental health disorders among university students. Thus, some students tend to implement various coping strategies to face symptoms of depression. These strategies, such as active actions, can either decrease the experience of depressive symptoms or induce cognitive functioning (Morton et al., 2014). Further sufficient coping strategies increase individuals' feelings of control and self-regulation, which will lead to an improved capability to manage depressive symptoms and often to the ability to adjust successfully to such conditions.

4.4.4 Promotive factors at the family and community levels

4.4.4.1 Sources of social support

Social support has a positive influence on resilience, wellbeing and academic performance by promoting a feeling of being connected to and supported by social networks; such a feeling is a significant factor in the face of stressors (Camara, Bacigalupe, & Padilla, 2017; Dafaalla et al., 2016; Kugbey, 2015). The results of this study support the first hypothesis (that promotive factors will be a significant predictor of increased levels of resilience), and revealed that sources of social support (family, friends, significant others) had a significant positive relationship with resilience. Similar results have been reported in

the literature (Arambewela & Hall, 2009; Bernardon et al., 2011; Weidong et al., 2012). This may be due to the motivation and feeling of support that students obtain from such sources, which induce adaptation and resilience levels. Therefore, the expansion of social networks in students' social lives is essential for their wellbeing and adjustment, such assumptions are supported by the stress and coping social support theory discussed in chapter 2 (Cohen & Wills, 1985). However, after adding sources of social support in the regression model, it was only social support from significant others that accounted for any variance and significantly predicted resilience. This may be because students at this stage of development seek close relationships and consequently have a partner while away from home and their familiar social networks. Furthermore, students at this age are trying to distance themselves from their family and to be more independent in their decisions while studying at university(Bernardon et al., 2011). It may be that the inclusion of the individual-level variables in the previous step affected the findings, but this does not negate the potential effect of social support on resilience.

The findings of the present study support the second hypothesis (that lack of promotive factors would be a significant predictor of increased levels of depression), and showed that the sources of social support had a significant negative relationship with increased levels of depressive symptoms. This is consistent with the evidence in the literature (Glozah, 2013; Kugbey, 2015; Ramezankhani et al., 2013). This may be due to the nature of university life, which allows students to establish social networks and close relationships. As students move away from home they are supposed to engage in social relationships at university to induce successful transition. Thus, the lack of such connections may explain the likelihood of experiencing depressive symptoms at university (Michael, Bowers, ColleenTerzian, Hunsberger, & Bruce, 2000). Furthermore, parents' maturity and experience of dealing with adversity may explain the importance of family

support, because maturity is considered to be an essential feature of social support providers when seeking help (Camara et al., 2017).

The findings of the present study also support the third hypothesis (that promotive factors will be a significant predictor of better university students' adjustment), and showed that family, friends and significant others support had a significant positive influence on academic performance. The findings are consistent with the evidence in previous literature (Ahmed, Minnaert, van der Werf, & Kuyper, 2010; Walker & Satterwhite, 2002). This may be because the development of their social life induces a feeling of support in students and thus improves their academic outcomes (Konishi, Hymel, Zumbo, & Zhen, 2010). Furthermore, the implementation of social support is considered an important factor in reducing academic stress, since university life is regarded as a source of increased stress levels (Liporace, Contini de González, Ongarato, Saavedra, & de la Iglesia, 2009; Shokri, Farhani, Kormi, & Moridi, 2013; Wrzesniewski & Chylinska, 2007). Feelings of being supported encourage academic performance and reduce the negative consequences of stress and increased workload at university (Mackinnon, 2012). However, after adding sources of social support in the regression model, none of the sources of social support accounted for the variance in academic performance. This may be in part because individual-level variables in the previous step accounted for much of the variance in academic performance compared to sources of social support, suggesting the importance of internal factors for students.

4.4.4.2 University belonging and support

University belonging and support have a significant positive effect on resilience, wellbeing, adjustment and academic outcomes. Individuals who have greater levels of university belonging and support are more likely to have higher levels of resilience (Scarf, Moradi, et al., 2016). The present study supports the first hypothesis (that promotive

factors will be a significant predictor of increased levels of resilience), and found that university belonging and support had a significant positive relationship with and was a significant predictor of increased levels of resilience. The findings of the study in this regard are consistent with those in the literature (Ali et al., 2018; Scarf, Hayhurst, et al., 2016). This finding was unsurprising since as the feeling of belonging to a community is a human need that leads to positive outcomes when met. Thus, given that most students at university have moved away from their local social networks, belonging, involvement, and support from their university is essential for them to achieve greater levels of resilience and to make a successful transition. Universities should therefore continue to promote a caring positive environment with suitable support that will give opportunities for students to connect with others on campus. If students do not feel like they belong to or are connected with the university, they are more likely to experience negative outcomes, and as a result transition issues may hinder students' adjustment to university life. The theory of Belongingness suggests that belonging is a human beings need and that minimum levels of belonging to surrounding environment is essential to individuals' wellbeing, proposing the significant role of such aspect to reach positive social and emotional outcomes (Baumeister & Leary, 1995).

The findings of the present study support the second hypothesis (that lack of promotive factors would be a significant predictor of increased levels of depression), and showed that a lack of university belonging and support is associated with increased levels of depressive symptoms and that belonging was a significant predictor in the regression model. These findings are consistent with those in the previous literature (Cornwell & Waite, 2009; Hall-Lande et al., 2007). This may be in part because a feeling of not belonging and being connected to the university may induce negative thoughts, in line with the cognitive vulnerability model, thus increasing the vulnerability of experiencing

depressive symptoms. Focusing on cognitive negative contents as proposed by this model and discussed in details in chapter 2 may increase the risk of depressive symptoms, such negative thoughts include for example when someone says I am worthless if I am not belonged or connected to others of communities such as university. On the other hand, students with greater levels of belonging should make a successful transition to university because such feelings affect motivation, positivity and the ability to persist with psychological issues.

Finally, the results of the present study support the third hypothesis (that promotive factors will be a significant predictor of better university students' adjustment), and found that university belonging and support had a significant positive relationship with and was a significant predictor of better academic performance. These findings are consistent with those of previous studies (Lemberger & Clemens, 2012; Lemberger, Selig, Bowers, & Rogers, 2015). This finding is unsurprising, since students' feelings of connectedness and support from the university might be expected to increase their involvement and sense of self-worth as members of the community, as well as their confidence when communicating with others. These may lead to improved academic performance and positive outcomes. Furthermore, the use of the available support services at university, be they counselling or learning services, might raise the quality of the university experience and students well-being, resulting in elevated levels of academic performance, and can improve the chances of a positive outcome and successful adjustment.

4.4.6 Strengths and implications

The current study sample was large, with a total of 404 university students who completed an online survey comprising of self-report questionnaires. Another strength is the use of validated measures; the current literature around student mental health suggests that past research has not done this. The findings postulate important evidence about the

relationships between and influence of promotive factors of resilience, wellbeing and adjustment among university students, with a comprehensive conceptual framework of three contexts – the individual level (hope, coping strategies), family level (family support) and community level (friends' support, significant others' support, university belonging and support) – and an examination of depressive symptoms. Examining the promotive factors with multiple outcomes such as resilience, academic performance, and depression among university students is a strength of the present study, in this respect considering a comprehensive novel framework provided an important understanding of such factors among university students that has been neglected by previous research.

The findings include valuable insights that will help universities to take action by investing in suitable interventions and preventive programs to increase the efficiency of available student services at university, and cost-effectiveness in the current climate, thereby improving the chances of successful transition and adjustment. Hope and coping strategies have consistently been shown to have a significant influence on students' resilience, wellbeing, adjustment and academic success, followed by university belonging, university support, significant others' support and family support. Thus, universities should make further efforts to implement and design preventive interventions and programmes focused on increasing students' hope; on providing them with coping strategies; and on making students feel more connected to university. They should also widen university support services so that they are more appropriate and accessible, and include social support sources found to be crucial in Chapter 2 and the present study. Furthermore, they should develop various appropriate ways to raise awareness of the significance of such multidimensional elements in achieving a successful transition and adjustment to university life, along with improved mental health, wellbeing and positive academic outcomes for students. In this study, individual level factors, such as hope and coping

strategies had a more significant influence on students' resilience, wellbeing, adjustment, and academic outcome than university belonging, university support, significant other support, and family support. Designing and implementing programmes that promote students' hope and their use of coping strategies, sense of belonging, and awareness of support services may be beneficial. In addition, it may be helpful to introduce social support groups, as the present study revealed a significant positive role of these factors for students' resilience, wellbeing, academic performance and adjustment, and quality of life. As mentioned in Chapter 2, the implementation of preventive and intervention programmes may promote the development of students' coping skills. This, and the introduction into the curriculum of courses that raise students' awareness of the role of these variables during transition periods, could influence students' success and adjustment to the university life. Education about support programmes and accessible services could be included in the curriculum of the first year to ease students' transition and induce successful adjustment including promotion of resilience and positive coping strategies.

As mentioned in Chapter 2, early prevention programmes for depression that could be used in a university context include email-based screening (Garlow et al., 2008) and web-based interventions (Haas et al., 2008; Moutier et al., 2012; Sole, Stuart, & Deichen, 2006). Further, valid and reliable measures of resilience and the factors that promote it could be developed and used in interventions. These steps are beneficial for detecting depressive symptoms or a lack of promotive factors at an early stage.

4.4.7 Limitations and future research

The current study has a number of limitations. First, like reported in Chapter 2 of this thesis, due to the cross sectional design this study could not detect the role, changes and development over time of students' hope, coping strategies, university belonging and sources of social support, which were difficult to follow because data collection took place

at one point in time. Such changes and development over time could have been assessed by applying a longitudinal method. Second, although the present study recruited more men students to increase their representation among the total number of participants above that for Study 1, women students who participated in this study still comprised 64.2% of the total, compared to over to 80% of the study is that reported in Chapter 2. As explained in Study 1, this may be because women students are more likely to respond to and complete online surveys than men students. Furthermore, a high number of students from the Department of Psychology completed the survey. The majority of students in this department are women, and the increased participation by this specific group of students may help to explain the imbalance in participation by gender. However, the imbalance in participation was reduced in comparison to that for Study 1 of this thesis to minimise such limitations.

Finally, future research should focus on a framework that expanding the resiliency theory by implementing different models of resilience. Also, examining the moderating and mediating role of the multidimensional context on the relationship between students' depressive symptoms, and academic performance. Moreover, implementing a longitudinal method, as suggested above, to examine variables might be worth considering in order to increase our understanding and identification of the developments, changes and patterns in these important elements, further assessing risk factors such as adversity prior to university entry can in turn help in the improvement of student mental health services at universities. Such an improvement, along with interventions and prevention programmes that encourage students' mental health and adjustment, would be beneficial for students' wellbeing.

4.4.7 Conclusion

Promotive factors including hope, coping strategies, social support from significant others, university belonging and university support are linked with elevated levels of resilience. Furthermore, hope, university support, and university belonging are associated with better academic performance, while lack of hope, coping strategies, social support from significant others and university belonging are linked with depressive symptoms. Focusing on increasing students' hope; on providing them with coping strategies; and on making students feel more connected to university with making use of sources of social support and university services is essential. Future research could focus on expanding the investigation of resiliency theory with such variables by implementing and comparing different models of resilience using a longitudinal method.

CHAPTER FIVE

Risk and Promotive Factors of Social and Emotional Wellbeing for University Students: Adversity and Resilience.

5. General Discussion

5.1 The prevalence of depression

The rate of occurrence of depression among university students, reported in chapters 2 and 4 of this thesis, was between 33% and 35%, which is comparable to the prevalence rates reported in the literature (Ibrahim, Kelly, Adams, & Glazebrook, 2013; Othieno, Okoth, Peltzer, Pengpid, & Malla, 2014). However, the findings of the present thesis are marginally greater than the 19% to 26% prevalence rates of depression found in a number of studies that had quite balanced proportion of men and women participants (Goebert et al., 2009; Roberts, Glod, Kim, & Hounchell, 2010; Steptoe, Tsuda, Tanaka, & Wardle, 2007). This might be due in part to the predominance of women in the sample for this thesis sample as there has been shown an increased vulnerability of experiencing depression for females compared to men (Roh, Jeon, Kim, Han, & Hahm, 2010; Schwenk, Davis, & Wimsatt, 2010). Women are also more likely to acknowledge and consequently report depressive symptoms. The rates of depression in the present thesis might be partly due to Durham University being one of the Russell Group universities where students have greater pressure to meet high expectations, academic demands, and gaining a high-class degree. Since 2011 there has been a 68 per cent increase in the use of counselling services by students at Russell Group universities (Brown, 2016). A rise in demand for student support services in The Nightline Association: (calls) is significant which rose by 96 per cent in Oxford and 147 per cent in Leeds between 2011 and 2015 (Brown, 2016).

In Chapter 3, the frequency of depressive disorders was found to be 38% (N = 19) of the participants, which is higher than the rates of 8% to 27% reported in the literature by different populations (Siddique, Imtiaz, Haider, & Afzal, 2015). This may be explained, in

part, by this being an enriched sample given selection was based on reported ChA and depressive symptoms, with a number of participants indicating the presence of severe depressive symptoms in the self-report instrument and that the sample does not represent the standard student population. Furthermore, the combination of ChA and CuA, along with common university stressors (including academic, financial and social strains), might promote an increased frequency of depressive disorders amongst this recruited sample of university students compared to other populations.

Inconsistent with earlier research in the related literature (Adewuya, Ola, Aloba, Mapayi, & Oginni, 2006), the present thesis did not find significant differences in rates of depressive symptoms between men and women students, as reported in chapters 2, 3, and 4. This may be due to the high number of women students who participated in the present studies, as this may have confounded the results by not allowing for a broad and thorough overview of the impact of risk and promotive factors on the social and emotional wellbeing of male students. Evidence has consistently shown that women university students have a greater tendency to participate in surveys than men students (Van Mol, 2017). Although previous studies have found significant differences in rates of depression between men and women (Roberts et al., 2010; Roh et al., 2010; Schwenk et al., 2010), their data seems balanced between genders compared to the current thesis thus may explain the inconsistency in depression rates with the present findings.

5.2 Framework of general discussion

The main focus of current student wellbeing research is on either risk or promotive factors consistent with the theoretical models of deficit and asset. The deficit model is identified as impairment, and lower performance of individual ability. According to the deficit model, mental health problems are the result of dysfunction and are credited to

some deficiency within the individual (Edwards, Mumford, Shillingford, & Serra-Roldan, 2007). It has been argued that relying only on this model depends on holding back until individuals experience the risk then act by implementing an intervention (Edwards et al., 2007).

The assets model on the other hand is defined as resources that individuals have which protect them from negative health outcomes and/or promote wellbeing (Harrison, Ziglio, Levin, & Morgan, 2004). This model focuses on factors protecting and promoting wellbeing and health, thus aligned with positive concepts such as resilience (Morgan & Ziglio, 2007). In this manner, Rutter argued that to understand resilience it is crucial to understand the factors that promote resilience and protect wellbeing and health for individuals (Rutter, 1987). This framework can be conceptualized by focusing on internal assets such as hope, and external assets such as social support. Rutter suggests that to reach a holistic understanding of promotive factors, a comprehensive evaluation of such factors at different levels is needed. Morgan and Ziglio (2007) also proposes that the implementation of an assets model and the deficits model would be beneficial by focusing on what is missing and positive resources that will induce the ability for individuals to achieve wellbeing and health development.

Therefore, the present thesis brings together a novel framework that examines the risk and promotive factors related to the social and emotional wellbeing of university students by bridging the knowledge gaps discussed in previous chapters. Such a framework and the findings from this thesis could be linked to the implementation of both the deficit model and asset model to provide a holistic understanding to inform the development of a comprehensive preventive and intervention programme for students.

In line with the deficit model, the present thesis analysed two main risk factors in Chapter 2 (i.e., ChA and CuA) that influence four key outcomes, and one main risk factor in Chapter 3 (i.e., dissociation) that is linked with three key outcomes. Individuals who experienced adversity, either in childhood or recently, are more likely to have mental health problems including depression throughout their lives (Carr & Francis, 2009; Hovens et al., 2012; Sachs-Ericsson, Blazer, Plant, & Arnow, 2005). These findings from the literature are consistent with the findings from the present thesis in chapter 2. The connection between ChA and CuA and increased levels of depressive symptoms has two likely explanations as discussed in Chapter 2. First, negative childhood experiences—such as emotional abuse and neglect—increase the probability of severe negative consequences on health and school performance later in life. For instance, children who are deprived of protection, care and love by family members or caregivers may develop negative thoughts of worthlessness or experience lower levels of self-esteem later in life; these, in turn, increase that person's vulnerability to depressive symptoms(Maughan & McCarthy, 1997). According to the stress sensitisation hypothesis, such adverse experiences are encoded as memory tracers in the brain, resulting in a sensitised stress response thus increasing vulnerability for mental health problems such as depression (Dienes, Hammen, Henry, Cohen, & Daley, 2006; Post, 1992; Rudolph & Flynn, 2007). This hypothesis is supported by the diathesis-stress model that posits that vulnerable individuals require lower levels of stress than non-vulnerable individuals in order to experience mental health problems (Dienes et al., 2006; Harkness, Bruce, & Lumley, 2006; Ingram & Luxton, 2005; Kendler, Kuhn, & Prescott, 2004; Rudolph & Flynn, 2007; Zubin & Spring, 1977). These assumptions are linked to the deficit model that proposes that such experiences are the result of stress associated with deficiency within the individual.

Second, the finding that CuA is a significant predictor of increased levels of depressive symptoms might be justified in part by the cognitive vulnerability model of depression. This model proposes that a cognitive focus on negative content precedes the symptoms of depression and that, consequently, the processing of negative information may lead to the development of symptoms of depression. Therefore, when experiencing CuA along with other stressors, individuals are more likely to experience depressive symptoms (Beck, 1987). The cognitive vulnerability model proposes that these cognitive styles evolve from prior experiences and reflect how individuals view themselves, others and the world around them. For example, a person may say 'without money I am nothing'. Thus, when students are provoked with current adverse experiences, such negative cognitive styles are activated and therefore influences how the stressors are perceived and processed. This links with the deficit model as depressive symptoms are the outcome of stressors and such negative cognitive styles are attributed to deficiency in students (Andrews & Wilding, 2004).

ChA and CuA also have a significant negative impact on academic outcomes, inducing poorer academic performance as evident in the literature (Borofsky, Kellerman, Baucom, Oliver, & Margolin, 2013; Coohey, Renner, Hua, Zhang, & Whitney, 2011; Kaloeti et al., 2018), and shown in the findings of this thesis. The negative influence of ChA on academic performance may be due in part to the vulnerability to neurobiological outcomes that affects neglected or abused individuals' academic performance (Repetti, Taylor, & Seeman, 2002). This is consistent with the neurobiological model of deprivation and threat that proposes deprivation and threat have a negative influence on neurodevelopment during the early years (Sheridan & McLaughlin, 2016). This theory also proposes that deprivation and threat might lead to deficits in neurocognitive function such

as executive functioning which is in line with the deficit model concept, and therefore may decrease students' academic performance (Sheridan & McLaughlin, 2016).

The negative influence of CuA on academic performance might be explained by the nature of this developmental stage of emerging adulthood and the exceptionally greater degrees of stressors faced by students during and after the transition to university. These stressors include meeting higher academic demands, establishing new social relationships, being away from usual social networks, dealing with financial problems and being responsible to manage daily life on one's own. These adjustment challenges, in addition to other severe adversity that might occur, such as illness or the death of a family member, are considered to be factors that put students at risk of a number of social and emotional problems. These problems can, in turn, result in negative academic outcomes and decrease overall academic performance by students (Yaffe & Wintre, 2000). In theory these findings might be stemmed from the proposed link between current adversity and cognitive function as such experiences have been associated with poorer performance of attention and processing speed (Pukay-Martin, Cristiani, Saveanu, & Bornstein, 2003). The deficiency for students resulted by lowering performance of cognitive function is likely to be associated with CuA. The significant role of cognitive processes in learning and the negative influence on attention and processing speed may also suggest the lower academic performance by students with the experience of current adversity.

Similarly, ChA and CuA have consistently shown a significant negative impact on individuals' QoL throughout their lifetime (Chan, 2013; Corso, Edwards, Fang, & Mercy, 2008; Jernbro, Tindberg, Lucas, & Janson, 2015; Jud, Landolt, Tatalias, Lach, & Lips, 2013; Lanier, Kohl, Raghavan, & Auslander, 2015; Weber, Jud, & Landolt, 2016), as well as evident in the present thesis results, These findings may be due to the lasting negative impact of the experience of ChAs on individuals' lives by reducing the quality of social

and psychological domains. Furthermore, the university environment itself presents numerous stressors and significant demands, which may result in poorer QoL for students. The quality of both psychological and social life can be affected by such adversities and daily stressors (e.g., a lack of financial resources, losing close relationships, the death of a relative or family member, and being ill for an extended period of time). Further the long lasting negative impact of both ChA and CuA on cognitive function with low performance such as memory attributed by the concept of deficit model may contribute to lower QoL.

Dissociative disorders have been shown to have a significant positive relationship with adverse experiences (Brunner, Parzer, Sculd, & Resch, 2000; Dalenberg et al., 2012; Dalenberg & Palesh, 2004; Gary Peterson, 1991; Martinez-Taboas & Bernal, 2000; Ross, Anderson, Fleisher, & Norton, 1991; Sanders & Giolas, 1991; Vonderlin et al., 2018; Watson, Chilton, Fairchild, & Whewell, 2006) and depression (Levin & Spei, 2004; Maaranen, Tanskanen, Haatainen, et al., 2005; Maaranen, Tanskanen, Honkalampi, et al., 2005), as well as a significant negative relationship with academic outcomes (Dell & Eisenhower, 1990; Flisher et al., 1997; Hobbs & Coons, 1994; Perzow et al., 2013). Consistently, the present thesis found similar results.

The significant positive relationship between dissociative disorders and CuA might be explained in part by the nature of university stressors and CuA, especially severe experiences such as serious illness or the death of parents, family members or other relatives that are likely to occur for this age group and the general population. Such severe experiences are likely to be accompanied by dissociative disorders among individuals encountering adversity and therefore dissociation may be triggered as a psychological defence mechanism (Vermetten, Dorahy, & Spiegel, 2007). This assumption is supported by the theory of dissociation which suggests that dissociation offers an escape as a core defence mechanism to dissociate from consciousness in order to avoid memorising adverse

experiences (Carlson, Yates, & Sroufe, 2009; van der Hart & Horst, 1989; Vermetten et al., 2007). This theory is linked to the deficit model as adverse experiences are associated with dissociative symptoms which might contributed to the deficiency of individuals' conscious.

The significant positive relationship between dissociative disorders and depressive disorders may be due in part to the experiencing of depressive symptoms especially severe symptoms triggering dissociation as a psychological resource (unconsciously) in an attempt to distance individuals from the depressive symptoms. One of the earliest justifications of this by the theory of dissociation in the literature suggests that dissociation is a coping mechanism experienced by individuals (unconsciously) reporting severe symptoms of depression that can influence cognition and consciousness as a strategy to avoid the feeling of negative emotions (Katon, Kleinman, & Rosen, 1982). Moreover, the cognitive vulnerability model of depression may add further explanation, which suggests that a cognitive focus on negative thoughts leads to depression. Therefore, the experience of adversity will increase the probability of having symptoms of depression (Beck, 1987). In light of this, experiencing adversity and severe symptoms of depression may place individuals at risk for experiencing dissociative symptoms. This could be associated to the deficit model as explained earlier by the cognitive vulnerability model, as depressive disorder arises from adverse experiences and negative cognitive styles which may attributed to deficiency in students.

The significant negative association between dissociative disorders and academic performance might be explained partly by the fact that symptoms of dissociation cause an experience of being removed from reality, which may hinder students' involvement in classroom activities and university lectures, therefore prompting poorer participation in studies and university life. Consequently, this could lead to poor academic performance

and a lack of connectedness to university. Such strains, in addition to adversity and depressive symptoms, may also illustrate the association between dissociative symptoms and poor academic outcomes for students. Other explanations of the present results may be derived from the negative effects that dissociative disorder has on cognitive function including for example memory, perception and attention (Osman et al, 2015). This negative influence is associated with the concept of deficit model as dissociative symptoms induce cognitive dysfunction that may attributed to deficiency in students.

The overall results related to risk factors of the social and emotional wellbeing of university students in the current thesis propose that various risk factors such as CA, CuA, and dissociation have significant negative outcomes on student wellbeing. The findings of such risk factors are associated with the cognitive issues including low cognitive function and the cognitive vulnerability model (negative cognitive styles). Such cognitive dysfunction may be linked with the deficits model discussed earlier in this chapter (Edwards et al., 2007). However, the assets model must also be considered to reach a holistic understanding of both risk and promotive factors in order to propose a sufficient framework of intervention and preventive programmes for university students.

Therefore, in line with the theoretical model of assets approach the present thesis analysed three main protective factors in Study 1 (Chapter 2) (i.e., three sources of social support) that influence four key outcomes, and seven promotive factors in Study 3 (Chapter 4) (i.e., hope, coping strategies, support from family, support from friends, support from a significant other, university belonging, and university support) that impact four key outcomes. Social support has a positive influence on mental health, academic performance, QoL, resilience and students' adjustment, by helping individuals feel connected and supported by social contacts. Social networks have been shown to be significantly linked to lowered symptoms of mental health problems, including depression

(Camara & Padilla, 2017; Dafaalla et al., 2016; Kugbey, 2015), increased academic performance (Ahmed, Minnaert, van der Werf, & Kuyper, 2010; Walker & Satterwhite, 2002), increased QoL (Dafaalla et al., 2016), and greater resilience levels (Arambewela & Hall, 2009; Bernardon, Babb, Hakim-Larson, & Gragg, 2011; Weidong et al., 2012). In accordance with previous literature the present thesis revealed similar findings. Such findings are likely due three reasons:

First, the positive influence of social support from family and friends on reducing symptoms of depression may be explained by proximity, as close relationships and shared experiences with friends while at university are beneficial to mental health. The university environment offers occasions for students to meet new people and create social connections that may become special relationships. Moreover, parents' maturity and depth of experience with life stressors may help to explain the findings, as the maturity level of students' sources of support is an essential element of a supportive environment (Camara, Bacigalupe, & Padilla, 2017). These notions are supported by the relational regulation theory (RRT) which hypothesises that the positive link between social support and mental health is driven by conversations and shared activities with others that accordingly help people regulate their thoughts and emotional problems (Lakey & Orehek, 2011; Wethington & Kessler, 1986). This may be linked to the assets model illustrated as resources that protect individuals from negative mental health outcomes such as depressive symptoms, as such positive resources include sources of social support that have been shown to act as a buffer against depression.

Second, the positive influence of social support on resilience and academic performance may be due to the feeling of support and connection that students acquire from such sources, which acts as a motivation to increase adaptation and resilience levels, in turn inducing better academic outcomes. Consequently, the expansion of social

connections in students' lives is crucial to their wellbeing, academic performance and adjustment to university studies and life (Konishi, Hymel, Zumbo, & Zhen, 2010). Therefore, the use and perception of various sources of social support are essential for decreasing the burden of stress in academic settings, explaining the positive role of such sources of social support in the lives of students.

Third, the positive influence of sources of social support on QoL may be explained in part by students' need for emotional support from family. Receiving such support leads to psychological wellbeing and, accordingly, improves their QoL. Another explanation might be students' need to build social connections and find contacts in the university and wider community; thus, such engagements enhance the quality of students' social relationships. Such explanations and findings are in line with the assets model which suggests that positive resources such as social networks promote positive outcomes for individuals.

The presence of hope and coping strategies in students' lives have a significant positive influence on resilience (Kirmani, Sharma, Anas, & Sanam, 2015; Ong, Edwards, & Bergeman, 2006), academic outcomes (Feldman & Kubota, 2015; Gallagher, Marques, & Lopez, 2017; Snyder et al., 2002) and mental health outcomes (Du, King, & Chu, 2016; Li, Wang, Mao, & Yin, 2018).The present thesis findings are linked with previous evidence in the literature. These findings from the current thesis are likely due to the following possible explanations. First, the positive influence of hope on resilience and academic performance is likely as elevated levels of hope lead to positive outcomes for students. This may be due to the theoretical perspective of hope (Hope theory), which relies on goal-oriented thinking and is comprised of the ability to ascertain expressive goals and to resolve problems efficiently to reach those goals (Rand & Cheavens, 2009). Accordingly, it appears that hopefulness might be a possible mechanism of adaption,

allowing for greater levels of resilience. Further, the positive impacts of hope on academic performance might be due to having clear short- and long-term plans, and setting goals that lead in this direction with positive thinking, will aid in the completion of academic tasks, hence improving academic performance and positive outcomes. According to hope theory, hope encourages students to recognise valuable goals relating to what they believe, to develop certain approaches to achieve those beliefs, and to explore the enthusiasm to pursue their goals (Snyder, 1995).

Second, the positive influence of coping strategies on resilience and academic performance might be due, in part, to the underlying elements of those coping strategies, such as having problem-focused emotions that increase resilience levels and lead to successful adjustments. The use and development of coping strategies by individuals assists them in developing the means to actively achieve higher levels of adaption to university. Consequently, students become more resilient. Moreover, the positive influence of coping strategies on academic performance may be explained by the fact that attending university is demanding and the increased workload requires more effort and time to meet learning standards. Encountering such challenges requires the implementation of coping strategies that help students to concentrate on successfully completing academic tasks. Hence, making use of active coping strategies—for example, problem-focused coping—is crucial and increases the likelihood of meeting demands. These assumptions are supported by Lazarus and Folkman (1984) theory of stress and coping which suggests the interaction between individuals and the environment is accompanied by stressors thus, the positive or negative use of available coping resources determines how such conditions will influence wellbeing. These findings discussed for hope and coping strategies may be linked to the assets model and consistent with resilience theory that includes such internal assets. In this manner the assets model proposes that positive available resources will lead to the

promotion of wellbeing and positive outcomes. Such outcomes in the case of the present findings include greater levels of resilience and better academic performance.

Third, the negative influence of the lack of hope on depressive symptoms might be due, in part, to the fact that pathway thinking based on hope theory is linked to depressive symptoms. Pathway thinking specifies individuals' purposes and ideas in pursuing their goals, and it is a cognitive component of hope (Tong, Fredrickson, Chang, & Lim, 2010). As such, when individuals lack clear goals or the formation of particular pathways by which to attain such goals, depressive symptoms may increase. Moreover, the negative impact of a lack of coping strategies on depression in the present thesis may be explained by that depression is common among university students, and insufficient use of coping strategies by some students reduces the ability to deal with depressive symptoms and in turn induces such symptoms. Further the theory of stress and coping discussed earlier may explain such findings as the negative influence on wellbeing is determined by the use of coping strategies, thus insufficient use of these resources may lead to such symptoms.

University belonging, and support also have a significant positive impact on resilience, academic performance, wellbeing and adjustment, acting as protective factors in the face of adversities (Cornwell & Waite, 2009; Lemberger, Selig, Bowers, & Rogers, 2015; Scarf et al., 2016). The findings of this thesis are consistent with these earlier studies Such results are expected for the following two reasons: First, the positive impact of university belonging and support on resilience levels and academic outcomes may be due to the fact that feelings of belongingness and support—cultivated by the university with the use of available resources—can increase students' involvement in the university community and sense of self-worth as members of the community, as well as their confidence. This can, in turn, result in improved levels of resilience, improved academic performance and a higher quality university experience. The theory of Belongingness

proposes that belonging is an important resource and feeling for individuals in order to reach satisfaction and appreciation with the surrounding community (Baumeister & Leary, 1995). The concept of belonging as a positive resource of wellbeing for individuals is linked with the assets model illustrating that individuals' resources promote positive outcomes that help to induce wellbeing such as resilience and university adjustment.

Second, the negative impact of a lack of university belonging and support on depression levels might be explained partly by the fact that, because students experience challenges, demands and adversities that are unique to the university environment, social isolation and a lack of support services can result in negative outcomes and transition issues. University students with such a lack of resources might find it more challenging to deal with the strain of university life, and this can induce depressive symptoms.

The overall findings related to promotive factors for the social and emotional wellbeing of university students discussed in this chapter suggest that various internal and external assets have a significant positive influence on student wellbeing. A lack of such assets may induce negative outcomes including poorer mental health and academic performance. Such internal and external factors are linked to the assets model Indeed, the multidimensional levels of promotive factors (assets) in the present thesis showed that, the individual level assets —consisting of hope and coping strategies—were consistently in all regression steps found to have a greater impact on all the study outcomes than did assets at the other levels. The second most important level was the community level, followed by the family level, demonstrating that although the individual level has the greatest influence on the resilience, wellbeing and academic performance of university students, the social support of others is also crucial. In Study 1 (Chapter 2), however, sources of social support, particularly friends and family, were found to have a more significant impact than social support from significant others on depressive symptoms, academic performance and

the QoL domains. These findings from study 1 suggest also the significant role of such sources of social support for student wellbeing and adjustment to university life in addition to social support from significant others. This is consistent with the assets model that proposes the important role of various promoting assets known as promotive factors; is important for individuals' wellbeing, and confronting negative situations.

5.3. Strengths and framework of preventive and interventions programmes

The present thesis recruited a large number of participants, with a university student sample of 461 in Study 1 (chapter 2), 50 in Study 2 – a subsample of Study1 (chapter 3), and 404 in Study 3 (chapter 4) who completed online surveys of self-report instruments. The findings of chapters 2, 3, and 4 advanced our understanding of the influence of multiple risk and promotive factors related to the social and emotional wellbeing of university students. Study 1 (Chapter 2) focused on the impact of CA, CuA and sources of social support on the social and emotional wellbeing of students, specifically providing evidence of the impact of CA, CuA and sources of social support on depressive symptoms, academic performance and QoL among university students. The examination was extended in Study 2 (Chapter 3), with the presentation of evidence related to the relationship between dissociative disorders and three key variables (i.e., CuA, depressive disorders, and academic performance), as well as their impact on the wellbeing of students in terms of CuA and the most severe symptoms of dissociation and depression among university students. Next, in Study 3 (Chapter 4), the findings provided important evidence about the relationships between and influence of the promotive factors of resilience, wellbeing and adjustment among university students. The chapter also outlined a comprehensive conceptual framework of three contexts—the individual level (i.e., hope and coping strategies), family level (i.e., family support), and community level (i.e.,

friends' support, significant others' support, and university belonging and support)—and examined depressive symptoms and CuA in light of these contexts.

To the best of the researcher's knowledge the present thesis proposes the first novel study that examines the risk and promotive factors related to various holistic variables (e.g., depression, academic performance, QoL and resilience) among university students. This thesis included multiple elements—such as CA, CuA, dissociative disorders and depressive disorders—along with particular sources of social support and a comprehensive conceptual framework of promotive factors to provide a fundamentally inclusive picture of university students' experiences, which prior studies may have failed to capture. The findings of this thesis present new and valuable information to extend the current knowledge of student mental health. Thus the findings will benefit students and aid universities and educational authorities as they strive to design and implement suitable preventive interventions and programmes. Empowering universities to achieve this goal will increase the likeliness that the interventions and programmes they offer will be effective, in turn influencing the social and emotional wellbeing students and increasing their positive outcomes.

In accordance of the theoretical deficits and assets models discussed earlier, the implementation of only deficit interventions was criticised due to focusing on a risk approach which tackles the risks and neglects factors promoting positive outcomes (Catalano, Hawkins, Berglund, Pollard, & Arthur, 2002). It was suggested that developing programmes that focus on promotive factors would be imperative (Viner & Barker, 2005). Therefore, the present thesis proposes holistic preventive and intervention programmes that are inclusive of both models by tackling the risks and what protects students' mental health and promoting positive social and emotional outcomes. In light of this, university authorities and policymakers could take advantage from the results of the present thesis as

they design intervention programmes to help students manage adversities, stressors and depressive symptoms or more severe forms of mental health problems, such as dissociative and depressive disorders. This could have a significant positive impact on student wellbeing by developing strategies that rely on sources of social support and multidimensional levels (consisting of various factors such as hope, coping strategies, university belonging and university support) that will help students successfully adjust to university life.

It is essential that university institutions, authorities, and policy makers responsible for designing support service programmes for students, and committees that review policies aimed to improve students' university experience strive to consistently add to and improve the prevention programmes offered to students. Although Higher Education, Student Minds, and others are collaborating together to develop a University Mental Health Charter, more efforts are needed and higher education, universities, practitioners, and NHS should work closely to review such policies and a strategic priority. Further, institutions should consider systematic preventive and intervention programmes that include risk and promotive factors of social and emotional wellbeing. Also a whole university approach with students and staff involved at all stages should be implemented. Such programmes are essential for all students but are particularly crucial at the early stages of a student's university career (e.g., the admission process and first years of study at the university), as at this time, stressors increasingly emerge and problems related to the transition to university life often arise. Taking early action and preventive steps can help universities and students to face such adverse experiences and stressors more effectively, helping them tackle any negative influence of these stressors on students' university life. This early action can help students avoid significant issues before they become more severe. Such adversities and stressors may include the demands of the university

experience, being away from familiar social networks and family, being independent and responsible for daily life, and increased financial difficulties. Other forms of severe adversities that may occur alongside everyday stressors while at university include, for example, the experience of having severe illness for an extended period of time, the death of family member or relative, breaking up with a romantic partner, or being involved in a car accident or court case.

Due to the key positive role of sources of social support in fostering students' social and emotional wellbeing, as seen in chapters 2 and 4, it is first important that universities form programmes that help students cultivate relationships with friends, significant others and family, as this is valuable for student wellbeing. .In addition to sources of social support, individual-level factors such as hope and coping strategies, as seen in Chapter 4, were found to have a greater impact on students' resilience, wellbeing, adjustment and academic outcomes, followed by university belonging, university support and social support from family and significant others. Designing and applying programmes that encourage students' hope, development and use of coping strategies, sense of belonging, and awareness of available support services would be valuable.

As mentioned earlier in this thesis, universities and policymakers should then take the second step of concentrating on early screening for depressive symptoms and other mental health problems, such as dissociative disorders, when students enter university or during the first year. This is essential, as it allows the university to engage with mental health services and benefit from making such services available to students. At this stage, students reporting severe symptoms should be looked after by experienced clinicians for further assessment and the design of intervention programmes. Moreover, regular follow-up visits with students should be conducted as needed to allow for faster recovery and a faster adjustment to university. Examples of prevention programmes at early stages, as

mentioned in chapters 2 and 4, include email-based screening (Garlow et al., 2008) and web-based interventions (Haas et al., 2008; Moutier et al., 2012; Sole, Stuart, & Deichen, 2006). Such programmes are useful for detecting possible depressive symptoms at an early stage, consequently increasing the effectiveness of interventions.

As stated in Chapter 3, when students report more severe symptoms of mental health problems, such as dissociative disorders, universities might benefit from implementing cognitive behavioural treatment strategies such as those proposed by Kennerley (1996). For students who are found to have a dissociative disorder with adverse experiences, treatment strategies such as cognitive restructuring and schema work may be valuable in designing and implementing clinical intervention programmes. The integration of these strategies should be in line with those recommended the programmes, consisting of sources of social support, hope, and skills for using coping strategies. This systematic approach would provide more positive outcomes and successful transitions.

Furthermore, alongside these strategies, university institutions should consider additional efforts to increase student engagement on campus, to increase awareness of the social supports available (such as support from family and friends), to promote students' sense of belonging and engagement with the university environment, to increase student knowledge of the support available from university staff, and to increase student access to university mental health services. For example, more focus on increasing students' sense of belonging, campaigns that advertise and present the university's goals, values and vision could be implemented, as well as the available services and programmes offered by the university. Other efforts could be considered to increase student involvement on campus, such as requirements that students join a society; take part in university, college, or departmental activities; or attend counselling sessions to gain advice and tips at least once each term. This could be done within schools, departments, colleges and societies, and

could be integrated into the curriculum to help increase awareness about these elements in addition to critical transitional periods.

These strategies may improve students' mental health, academic performance, sense of belonging and sense of connectedness to their environment. It is essential to remember that, for students to achieve their goals, it is necessary to increase their engagement with the available resources, activities, mental health support and university support services. This can be done by carrying out regular campaigns that promote the engagement with such strategies and services. In addition, universities should attempt to encourage help-seeking behaviour, promote students' sense of belonging and involvement, and facilitate positive social patterns. These steps, in turn, could improve students' resilience and social and emotional wellbeing, leading to their successful adjustment to university life.

5.4 Limitations, and future research

This thesis has a number of limitations. First, the implementation of a cross sectional design with the dependence on self-report instruments in chapters 2, 3, and 4 in this thesis did not allow for the tracking of the development or changes over time in the risk and promotive factors, such as adversities or dissociation (particularly the experience of CA, which may have recall difficulties). It also did not allow for further investigation into the promotive factors, such as sources of social support, hope, coping strategies, university belonging and university support for an extended period of time. This could have been investigated by applying a longitudinal approach to identify the changes and patterns of development of such promotive factors for students over time.

Second, the majority of the samples was women students. The reason for this is twofold. This may be related to evidence found in the literature showing that women

students are more likely to participate in and complete online surveys than are men students. It is also worth noting that although students from various schools and departments throughout the university participated in the online surveys, a high percentage of the students were from the department of psychology, which might impact the types of students involved in the study. This might be explained in part by the fact that the department of psychology was the only department that offered course credits to students for completing such surveys. In addition, the department of psychology contained a higher percentage of women than men students, which could also contribute to the aforementioned phenomenon of more women completing the surveys than men. This might hinder the results of any gender variance comparisons within the current samples and affect the generalisability of the findings of this thesis to other schools and departments.

Although the percentage of women and psychology students was reduced in Study 3 (Chapter 4) compared to Study 1 (Chapter 2), it is still high and therefore considered a limitation. Future research should ensure an equal number of men and women participants from various departments by using techniques that encourage males to participate. Employing such methods during the sample recruitment procedure will help in acquiring a wide and equal representation within the university. In this respect after receiving the ethical approval the researcher faced some challenges to implement all these methods in Study 3 (chapter 4) due to delays on approving the recruitment from some colleges, departments and societies. Therefore, seeking approvals in advance from all university boards such as students' union, and colleges to employ such methods is important to reach a wide and equal representation.

In Studies 1, 2 and 3 (chapters 2, 3, and 4), this thesis examined the risk and promotive factors related to social and emotional wellbeing, including adversities and the more severe symptoms of mental disorders (e.g., such as depressive disorders and

dissociative disorders) along with sources of social support. These studies also examined multidimensional levels of promotive factors (e.g., hope, coping strategies, university belonging, and university support) to gain deeper insights that will help in improving mental health services at universities. To build on the findings of this thesis, future research might focus on a theoretical framework based on the resiliency theory and take it to further exploration by implementing different models of resilience such as compensatory model, risk-protective model, and protective-protective model using a longitudinal method. These different models will provide rich information that the present study may have failed to provide. For example, what would moderate and mediate such influences of these variables. Applying a longitudinal research method, as suggested earlier, to examine the thesis variables is essential and may be valuable in improving our knowledge of the patterns, changes, and developments that occur over time. Identifying developments in these essential variables will aid in the enhancement of the mental health services provided for students at universities, and would be valuable for the social and emotional wellbeing of students.

5.5 Conclusion

Risk factors including childhood adversity and current adversity have a negative influence on the social and emotional wellbeing of university students such as elevated levels of depression, poor academic performance and quality of life. Severe forms of mental health disorders such as dissociation have been linked to depressive disorder, adverse experiences and poor academic performance. Promotive factors on the other hand including several levels/factors such as sources of social support, hope, coping strategies, university belonging and support have positive influence on the social and emotional wellbeing of university students by promoting resilience, academic performance and protecting from mental health problems such as depression. The present thesis has

provided a comprehensive understanding of risk and promotive factors for the social and emotional wellbeing for university students, and further added a novel knowledge to the existing literature. Holistic preventive and intervention programmes that are inclusive of both risk and promotive factors such as screening for mental health problems and designing programmes that involve sources of social support and fostering students' hope, university belonging and the use of coping strategies are essential. Future research could extend the present findings by expanding a framework based on resiliency theory using different models of resilience by the use of a longitudinal method to tackle changes, patterns of risk and protective factors.

Appendix 1

Publications and conferences

Oral presentation

A paper on Study 1A entitled “Depressive disorder and dissociation in university students- a subsample from the SOWISE” (part of Study 2) was presented at The European Conference on Psychology & the Behavioral Sciences. It is organised by The International Academic Forum (IAFOR) and was held during July 2018 in Brighton, UK. The theme of the conference was "Surviving and Thriving in Times of Change" covering a wide range of critically important sessions such as Mental Health and Behavioral Disorders, and Dissociative and Addictive Disorders.

Oral presentation

28th Euro Congress on Psychiatrists and Psychologists

July 05-06, 2018 -Vienna, Austria Title: Depression and quality of life in university students: The role of sources of social support (part of Study 1).

Publications

One paper entitled “The role of sources of social support on depression and quality of life for university students” was published from this thesis (part of Study 1) in the journal of adolescence and youth (2019, please see the link https://www.tandfonline.com/doi/full/10.1080/02673843.2019.1568887).

Title: The role of sources of social support on depression and quality of life for university students.

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Abstract

Prevalence of mental health problems in university students is increasing and attributable to academic, financial and social stressors. Lack of social support is a known determinant of mental health problems. We examined the differential impact of sources of social support on student wellbeing. University students completed an online survey measuring depressive symptoms (Patient Health Questionnaire (PHQ-9)), social support (Multidimensional Perceived Social Support (MPSS)), and quality of life (WHOQOL-BREF). The sample was 461 students (82% female, mean age 20.62 years). The prevalence of depressive symptoms was 33%. Social support from family, and friends was a significant predictor of depressive symptoms (p=0.000*). Quality of life (psychological) was significantly predicted by social support from family and friends. Quality of life (social relationships) was predicted by social support from significant others and friends. Sources of social support represent a valuable resource for universities in protecting the mental health of students.

Key Words

Social support, depression, quality of life, university students

1. Introduction

Depression is a common global health problem, one of the most common causes of disability, and affects around 9% of men and 17% of women in Europe (World Health Organisation, 2016). A systematic review showed the weighted mean prevalence of depression among university students is 30.6% compared to 21.6% recorded for the general population (Ibrahim, Kelly, Adams, & Glazebrook, 2013). In the United Kingdom (UK) a recent national survey of 1,2000 university students found that 80% of students reported experiencing stress, 55% reported anxiety and 49% reported depression (Brown, 2016).

University is a period of change as young people develop new skills, experiences, expand social networks and gain knowledge. For many students going to university can be a stressful life event as they negotiate changes in lifestyle, community and relationships (Bayram & Bilgel, 2008; Ibrahim et al., 2013; Steptoe, Tsuda, & Tanaka, 2007). The transition from adolescence to young adulthood brings significant challenges such as being accorded with the opportunity to manage one's life and deal with roles of greater independence (Lenz, 2001). During this transition the young person is able to explore and experiment on who they are and who they want to be in the future. For many university students, it is the first time of living away from home for an extended period.

The surge in the number of people who attend university and complete undergraduate and postgraduate degrees in the UK has resulted in university education becoming more challenging and with increased academic demands (Andrews & Wilding, 2004; Department of Education, 2016). The provisional (UK) Higher Education Initial Participation Rate (HEIPR) estimate for the 2014/15 academic year was 48%, up by 1.7 percentage points compared with the estimate for 2013/14. This growth was driven by an

increase of about 12,000 entrants aged 17 to 30 years, up from 313,910 in 2013/14 to 325,470 in 2014/15 (Department of Education, 2016).

More university students worldwide are currently being diagnosed with mental health problems, and many researchers attribute this to academic, financial and social stressors (Chen et al., 2013; Larcombe et al., 2016; Othieno, Okoth, Peltzer, Pengpid, & Malla, 2014; Robotham, 2008). Depressive symptoms among university students have been associated with independent decision making such as being on their own and managing their daily life, and financial difficulties (Andrews & Wilding, 2004; Leykin & DeRubeis, 2010). Academic performance also contributes to the risk of depression and mental health problems (Beiter et al., 2015) as many students experience academic requirements in university as more demanding than in secondary schools.

Social support has been shown to promote mental health and acts as a buffer against stressful life events (Dollete & Phillips, 2004). Social support is derived from a network of people drawn from family, friends and community (Awang, Kutty, & Ahmad, 2014; Zimet, Dahlem, Zimet, & Farley, 1988). A lack of social support is a determinant of mental health problems including depressive symptoms among university students (Bukhari & Afzal, 2017; Safree & Dzulkifli, 2010), and has a negative impact on quality of life for students (Dafaalla et al., 2016). Research evidence indicates a significant negative relationship between social support and psychological disorders including depression and stress (Alimoradi, Asadi, Asadbeigy, & Asadniya, 2014; Bukhari & Afzal, 2017; Kugbey, 2015). Consistent findings from these cross sectional studies revealed the important role of social support on students' wellbeing. A study of 115 university students found students who had higher social support had lower rates of stress and were well-adjusted to university (Friedlander, Reid, Shupak, & Cribbie, 2007). Likewise, it was found that the impact of academic stress defined as frustrations, conflicts, pressures, changes and self-

imposition on psychological wellbeing depends on the level of perceived social support from friends (Glozah, 2013). A study found that social support from family and friends has a substantial impact on the emotional, social and academic performance of university students (Awang et al., 2014). However, in this developmental stage of adolescence, friends are increasingly more important as a source of social support compared to family (Kugbey, 2015), as the emphasis shifts from parents to that of peers as the child seeks to individuate from family. This is supported by a study showing social support from friends is a significant predictor of depression in university students (Wörfel, Gusy, Lohmann, Töpritz, & Kleiber, 2016). Two systematic reviews on the relationships between social support, depression and wellbeing including various age groups with a mean age of 20 years showed the crucial role of social support as a predictor of young people's mental health, but did not investigate quality of life (Chu, Saucier, & Hafner, 2010; Rueger, Malecki, Pyun, Aycock, & Coyle, 2016), thus there is a need for further studies to explore such associations.

There is extensive research on the impact of social support on depression in the adult and general population. However, the university population has specific issues and represents a unique stage of developmental transition including newfound independence and social relationships (Robotham, 2008). Therefore, determining specific sources of social support that protect mental health and quality of life is essential for the emotional, social and academic adjustment of university students. Previous research on social support among university students has not examined the impact of sources of social support on both depressive symptoms and quality of life, and has focused on outcomes such as depression, anxiety and psychological distress (Alimoradi et al., 2014; Hamdan-Mansour & Dawani, 2008). There is some evidence for the impact of social support on depressive symptoms and quality of life in university students but these samples were restricted to

medical students and thus may not be representative of the student population (Dafaalla et al., 2016). Our study will address these issues by examining the impact of different sources of social support on depressive symptoms and quality of life in university students.

2. Method

The study was a cross-sectional design for an online survey using Qualtrics software. Ethical approval was obtained from the participating institution. The inclusion criteria were university students, aged 18 years and over. The online survey was advertised across all departments, colleges and societies using a variety of procedures such as postcards, posters, and a URL online link that was promoted by the university students' union and sent by email to all students registered with the union (7, 000 students). The study was promoted across lectures, common rooms and social media. Participation was voluntary and all participants were asked to provide informed consent by checking a box in the online survey. The recruitment process occurred during February to mid-March 2016. To increase the participation rates all participants were entered into a prize draw to win either an IPAD or one of four Amazon vouchers of £50 each. Furthermore, psychology students were allocated course credits for taking part.

2.1 Measures

Demographic variables

The demographic variables included gender, age, year of study, moved away from home and employment status while studying.

Depressive symptoms: Patient Health Questionnaire (PHQ-9)

The Patient Heath Questionnaire-9 (PHQ-9) was used to assess depressive symptoms (Kroenke, Spitzer, & Williams, 2001), and comprises nine items based on the DSM-V criteria for depressive disorder. Examples of items from PHQ-9 are experiencing

“little interest or pleasure of doing things”, “feeling down, depressed, or hopeless” and, “poor appetite or overeating”. The responses are rated on a 4-point Likert scale from 0 (not at all) to 3 (nearly every day) (Thombs, 2014). The score range for the PHQ-9 is 0-27, and scoring is done using the sum of ratings for severity of each item. In this study, the cut-off score for depression was 10 (Kroenke et al., 2001). The scoring criteria included three levels with a score of 10-14 indicating mild depression, 15-19 moderate to -severe depression, 20 or more as severe depression (Kroenke et al., 2001). The PHQ-9 has been shown to have excellent internal reliability, with a Cronbach's α of 0.86 to 0.89 (Kroenke et al., 2001).

Social support: Multidimensional Scale of Perceived Social Support

The Multidimensional Scale of Perceived Social Support (MSPSS) is a 12 item self-report scale used to measure sources of perceived social support from family, friends and significant others (Zimet et al., 1988).The scale is rated on a 7-point Likert scale from 1 - (very strongly disagree) to7 - (very strongly agree). Higher scores on all sections are related to greater social support. The overall internal consistency for this scale was found between .80 and .95 (Zimet et al., 1988).The MSPSS has three sub-scales with 4 items for each type, High internal consistency was found for all three subscales: significant other (.91), family (0.91) and friends (.89) (Canty-Mitchell & Zimet, 2000). All three sub-scales of the MSPSS : significant other, family, and friends were used in the analysis.

Quality of life: WHOQOL-BREF

The WHOQOL-BREF is a 26 item self-report scale that is widely used to assess quality of life (World Health Organisation, 1998; Zhang et al., 2012). The response options range from 1 (very dissatisfied) to 5 (very satisfied) with higher scores indicative of elevated levels of quality of life. The scale consists of four domains: physical health (7

items), psychological health (6 items), social relationships (3 items), and environmental health (8 items). Two domains were used in this study: (i) the Psychological domain which comprised of six items about body image, positive & negative feelings, self-esteem, personal beliefs, thinking and concentration; and (ii) the Social Relationships domain which comprised of three items about personal relationships, social support and sexual relationships. These domains were selected due to being highly relevant for the age group and the study variables (social support sub-scales, depression) as both domains encompass social activities and aspects that promote a successful transition for the age group. Internal consistency for the WHOQOL-BREF has been calculated between .81and .95. Good internal consistency has also been reported for the psychological domain (.79) and the social relationships domain (0.75) (Rehabilitation Measures Database, 2014).

2.2 Statistical analysis

The whole sample was divided into three groups by the PHQ-9 scores, no depression (<=9), mild to moderate depression (10-14), and moderately severe to severe depression (15-27). The moderately severe and severe groups were combined in order to have sufficient numbers for group comparisons. Data analysis was conducted using SPSS software version 23. Frequency and descriptive data for socio-demographic variables were presented for all groups. Mean scores of the scales were compared, and one-way ANOVA and Chi-square performed as appropriate to examine group differences. Bivariate correlations to examine the relationship between all variables of interest were performed, and a hierarchical multiple regression analyses on the full sample was conducted to examine the predictors of depression and quality of life domains (psychological and social relationships). Three models were performed; the first one included potential predictors of depression, the second one included potential predictors of quality of life in the psychological domain, and in the third model we included potential predictors of quality of

life in the social relationships domain. Step one of the analysis in all three models included the following demographic variables age, gender, year of study, moved away from home, and employment while undertaking studies. Step two included social support sub-scales (significant others, family, friends). In all models 1, 2, and 3 tolerance was greater than .10, and the variance inflation factor was less than 10 suggesting that multicollinearity was not an issue. Statistical significance was defined at the 0.05 level in all analyses.

3. Results

The sample of 461 students was predominately female (82%, n=378) and the mean age was 20.62 years (SD 3.34). The majority of the sample was undergraduate students (93.3%, n=430), and most had moved out of their home area (91.8%) to study at university. Of those students who moved away from home, 22.3% (103) were international students. Regarding students employment while undertaking their studies, 26.9% (N=124) of the students were employed (see Table 1).

INSERT TABLES 1 AND 2 AROUND HERE

Prevalence and correlates of depression

For the full sample, 33% (N=152) met the inclusion criteria for depressive symptoms, with 95 (20.6%) students reporting mild to moderate depressive symptoms, and 57 (12.4%) reporting moderately severe to severe depressive symptoms. There was no significant difference between groups for gender ($x^2(2) = 1.445$, $p=0.486$), year of study ($x^2(2) = 15.412$, $p=0.118$), moved away from home ($x^2(2) = 0.309$, $p=0.857$), employment while undertaking studies ($x^2(2) = 1.377$, $p=0.502$), and age ($t(150)=.244$, $p=0.808$). Within the full sample, female students reported significant higher levels of social support from

significant others ($F(1,459)=3.986$, $p=0.046$), *(M* = 21.785, *SD* =5.782) compared to male students (*M* = 20.385, *SD*=5.799).

Social support

An analysis of variance (ANOVA) on depression groups revealed a significant variation between the groups in the social support subscales of: significant others $F(2,458)=7.456$, $p=0.001$., family $F(2,458)=18.234$, $p=0.000$., and friends $F(2,458)=27.511$, $p=0.000$. A post hoc Tukey HDS test showed that the no depression group reported higher scores and differed significantly from the mild to moderate depression group, and the moderately severe to severe depression group in all social support subscales (significant others, family, friends) at $p=0.05$. There was no significant difference between the mild to moderate depression group and the moderately severe to severe depression group for any of the social support subscales (see Table 2).

Quality of life

An analysis of variance (ANOVA) on depression groups showed significant differences between the groups in quality of life, for the psychological $F(2,458)=163.626$,$p=0.000$, and social relationships domains $F(2,458)=23.429$,$p=0.000$. A post hoc Tukey HDS test showed that the no depression group reported higher scores and differed significantly from the mild to moderate depression group, and moderately severe to severe depression group in all quality of life domains (psychological, social relationships) at $p=<0.001$. Also, the mild to moderate depression group differed significantly from the moderately severe to severe depression group in both quality of life domains (psychological, social relationships) at $p<=0.05$ (see Table 2).

INSERT TABLE 3 AROUND HERE

Predictors of depression

Results from correlation analysis (see Table 3) indicated a significant negative correlation between all sources of social support and depressive symptoms at p=0.01., and between both domains of quality of life and depressive symptoms. Finally, there was a strong positive correlation between the social support subscales and the quality of life domains. There was a strong correlation between depression and the psychological domain of quality of life.

A hierarchical regression analysis showed that in the first model (1) predicting depression was not significant at the first step F(5,455)=1.509.p=0.186, but was significant at step 2 F(8,452)=15.507, .p=0.000 (see Table 4). Gender, year of study, moved away from home and employment while undertaking studies were not significant predictors of depressive symptoms, while age was the only significant predictor of depressive symptoms in the first step. In the second step of the model age was no longer a significant predictor, gender at this step was a significant predictor of depressive symptoms with being female associated with higher depression scores. Furthermore, social support from family and social support from friends were the only significant predictors of depressive symptoms from the social support subscales. The change in R^2 at the second step showed that social support sources accounted for 19.9% of the variance in depressive symptoms (Table 4).

INSERT TABLE 4 AROUND HERE

The second model (2) predicting psychological quality of life was not significant at the first step F(5,455)=1.379.p=0.231 , but was significant in step 2 F(8,452)=24.462.p=0.000 (see Table 4). Step one of the analysis in model 2 indicated that gender, age, moved away from home, year of study, and employment while undertaking studies were not significant predictors of the psychological domain of quality of life. In the

second step of the model, gender became a significant predictor of quality of life in the psychological domain. Furthermore, only social support from family, and friends were significant predictors of the psychological domain. The change in R^2 at the second step showed that the social support sources accounted for 28.7% of the variance in the psychological domain of quality of life (Table 4).

The third model (3) predicting the social relationships domain of quality of life was not significant at the first step $F(5,455)=1.235$, $.p=0.251$, however it was significant in step 2 $F(8,452)=42.651$, $.p=0.000$ (Table 4). Step one of the analysis in model 3 revealed that gender, moved away from home, year of study and employment while undertaking studies were not significant predictors of the social relationships domain of quality of life, the only significant predictor at this step was age. In the second step age was no longer a significant predictor. Social support from significant others, and friends were the only significant predictors of the social relationships domain. The change in R^2 at the second step showed that social support sources accounted for 41.6% of the variance in the social relationships domain (Table 4). The f^2 was calculated for all models to interpret the effect size of the predictors added into the models. Model 1 predicting depression showed that the effect size of the sources of social support added in step 2 was medium. Model 2 and 3 predicting psychological and social quality of life showed that the effect size of the sources of social support added in step 2 was large.

4. Discussion

Prevalence of depression

This research study aimed to determine the impact of social support on depressive symptoms and quality of life among university students. The prevalence of depression was 33.0%, and is comparable to the rates found in previous studies (Ibrahim et al., 2013;

Othieno et al., 2014). However, our findings are slightly higher than the 19-26% rates of depression reported in some studies (Goebert et al., 2009; Roberts, Glod, Kim, & Hounchell, 2010; Steptoe, Tsuda, Tanaka, & Wardle, 2007). This might be due to different self-report measures used in previous studies and the variation in the sample size collected. Moderate to severe depression was reported by 8%, and severe depressive symptoms by 3.4% of university students in our study. These results are slightly lower than the rates of 4-6% reported in previous studies (Asante & Andoh-Arthur, 2015; Chen et al., 2013; Othieno et al., 2014). The overall prevalence of depression in our study (33%) is consistent with the average rates reported in a systematic review that revealed the prevalence of depression among university students ranges between 10-85% (Ibrahim et al., 2013). The high variation in prevalence rates in the literature among university students is likely due to culture differences, types of instruments used, and the sample recruited (Ibrahim et al., 2013). Unlike previous studies no significant difference was found in rates of depression between male and female students (Adewuya, Ola, Aloba, Mapayi, & Oginni, 2006). It is possible that the high percentage of female students in our sample may have confounded the findings by not capturing a comprehensive overview of the impact of social support sources on depression and quality of life domains for male students. However, data from the participating institution revealed this was a representative sample in that the majority of students across the university were female.

Predictors of depression

Social support has a positive role on mental health and quality of life by helping individuals to feel appreciated and connected with social networks. This feeling of being supported is related to lower levels of mental health problems and therefore acts as a protective factor against depression (Camara & Padilla, 2017; Dafaalla et al., 2016; Kugbey, 2015). Our results revealed that social support from family and friends are

predictors of depressive symptoms and significantly negatively correlated with depressive symptoms as per the previous findings in the literature (Bukhari & Afzal, 2017; Safree & Dzulkifli, 2010). Several research studies have shown that social support from significant others, family and friends predicts well-being and depression (Glozah, 2013; Kugbey, 2015; Ramezankhani et al., 2013). Consistent with our findings a study showed that social support from friends is more important for university students and was a strong predictor of depressive symptoms compared to social support from family and significant others (Kugbey, 2015). This might be due in part to the close relationship, proximity and sharing of experiences with friends in this age group while at university. Also, the university environment encourages students to meet new people, create social networks and have special relationships. At this age students spend more time with peers compared to families as most students move away from their home area to study at university (Michael, Bowers, ColleenTerzian, Hunsberger, & Bruce, 2000). It is a transitional stage for university students from adolescence to early adulthood to explore their identity and shape their social characteristics. All of these factors are attributable to the crucial role of the support of friends during this transitional phase. In addition our results showed that social support from family was also predictive of depressive symptoms, albeit not as strong a predictor as support from friends. These findings are consistent with previous studies and highlight the important role of family in providing support to protect the mental health of students (Hamdan-Mansour & Dawani, 2008). One condition that might explain the importance of the family as a source of social support is the parents' maturity and rich experiences with life stressors, as the maturity of the sources of support is considered as an essential condition when individuals seek support (Camara, Bacigalupe, & Padilla, 2017). The strongest prediction of depressive symptoms from friends compared to family is likely to

be found in this age group and might be explained by the proximity of friends and the need of support while at university especially for those moved away from home.

Social support from significant others has been shown to have a positive influence on university students' mental health (Kugbey, 2015). Contradictory findings in the literature revealed that social support from significant others predicts depressive symptoms among university students (Kugbey, 2015), while some studies did not find social support from significant others predicted depressive symptoms (Hamdan-Mansour & Dawani, 2008; Safree & Dzulkifli, 2010). In this study, we found that social support from significant others did not predict depressive symptoms. The inconsistency of the findings in the literature could be attributable to different measures used, mainly the constructions of other scales which measure wider domains or total scores or focused only on specific sources such as social support from family and friends. Also, the informal sources of social support from both friends and family might be regarded as more trustworthy and reliable compared to other sources. This reflects the importance and strength of our study by examining specific sources within social support and this has not been used consistently in the literature, hence some studies may have failed to capture this.

Our findings also indicated that female students reported significantly higher levels of social support from significant others compared to male students. Similarly other studies have reported that overall female students had more social support than male students (Kugbey, 2015; Tahmasbipoura & Taheri, 2012). The higher level of social support among female students may be due in part to the higher levels of help seeking behaviour by females as reported in the literature compared to males (Hamdan-Mansour & Dawani, 2008; Tahmasbipoura & Taheri, 2012). It is possible that females are more vulnerable to stressors, and relationships with others but that they are sociable and tend to make better

use of social support sources and emotional support strategies to manage such stressors and relationships problems (Camara & Padilla, 2017; Rose & Rudolph, 2006).

Quality of life is a multidimensional concept that assesses positive and negative aspects of psychological, social, environmental and physical health (Zhang et al., 2012). Research has shown that quality of life is influenced by social support and has a positive, profound impact on students attending university including social, academic, and psychological health which result in a successful transition to university (Zhang et al., 2012). We found that social support from friends or family were strong predictors of the psychological domain of quality of life, and social support was also significantly positively correlated with quality of life. The findings are consistent with a previous study which showed the importance of social support on quality of life in university students (Dafaalla et al., 2016). Quality of life is influenced by different social factors including relationships, friends, teachers, moved away from home, expectations of parents, and peer pressure. Also we found that social support from friends or, significant others were predictors of the social relationships domain of quality of life. Social support from family as a stronger predictor of the psychological domain of quality of life when compared to the social relationships domain may be explained partly from the literature that suggests individuals seek emotional support from family in critical crises and that this will increase the quality of psychological wellbeing. On the other hand, social support from significant others as a predictor of the social relationships instead of the psychological domain of quality of life maybe informed by the need for forming social connections and being part of the university and the wider community, as such relations encourage the quality of social relationships.

The social relationships domain of quality of life was positively correlated with the three sources of social support (family, friends, significant others), and is likely to be

influenced by both scales assessing social interactions and the quality of such relationships. The greater pressure on university students to do well in academic tasks and to identify who they will become in the future is a possible explanation for some students reporting increased psychological problems and lowered quality of life. Our results showed a significant positive correlation between quality of life in the psychological and social relationships domains. This is likely to be due to strong and stable social relationships increasing the quality of the psychological wellbeing. Our study provides evidence with regards to the positive and negative impact of social support sources on depressive symptoms and quality of life domains in university students.

Generally, this study showed that sources of social support showed a significant impact on depression and quality of life for university students and represent a valuable resource for universities in protecting and supporting the mental health of students. Social support from family and friends has a significant role in decreasing the risk of depressive symptoms and increasing quality of life in the psychological domain. On the other hand, social support from significant others and friends has a significant role in improving the quality of life in social relationships domain in university students. These findings provide knowledge for the development of effective interventions and prevention strategies for both students and universities. Increasing the awareness of specific sources of social support will be protective of the social and emotional well-being of students.

5. Limitations:

A large sample of 461 university students completed an online survey of self-report measures. While the sample was predominantly female, this reflects the overall student population at the university, and the UK university student population whereby 53.5% of the overall percentage of students attending university are female (Department of

Education, 2016). This study did not capture the patterns, changes and development of social support from different sources over time as could have been achieved by a longitudinal approach. Finally, half of the sample was from the Department of Psychology and this might affect the representation of all schools and departments. This was partly due to recruitment being driven by psychology students promoting the study and psychology was the only department to offer course credits. Furthermore, a large proportion of psychology students were female and this may partly affect the generalisation of the study findings to other departments, or detect any gender differences within the sample. Future research could target male students and other departments equally during the recruitment to have a better representation.

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The authors declare that they have no competing interests.

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References

Adewuya, A. O., Ola, B. A., Aloba, O. O., Mapayi, B. M., & Oginni, O. O. (2006). Depression amongst Nigerian university students. Prevalence and sociodemographic correlates. *Soc Psychiatry Psychiatr Epidemiol, 41*(8), 674-678. doi:10.1007/s00127-006-0068-9

Alimoradi, M., Asadi, H., Asadbeigy, H., & Asadniya, R. (2014). The Study of Links between Social Support and Psychological Problems among Youth. *International Journal of Basic Sciences & Applied Research, 3*, 270-274.

Andrews, B., & Wilding, J. M. (2004). The relation of depression and anxiety to life-stress and achievement in students. *Br J Psychol, 95*(Pt 4), 509-521. doi:10.1348/0007126042369802

Asante, K. O., & Andoh-Arthur, J. (2015). Prevalence and determinants of depressive symptoms among university students in Ghana. *Journal of affective disorders, 171*, 161-166. doi:10.1016/j.jad.2014.09.025

Awang, M. M., Kutty, F. M., & Ahmad, A. R. (2014). Perceived Social Support and Well Being: First-Year Student Experience in University. *International Education Studies, 7*(13). doi:http://dx.doi.org/10.5539/ies.v7n13p261

Bayram, N., & Bilgel, N. (2008). The prevalence and socio-demographic correlations of depression, anxiety and stress among a group of university students. *Social Psychiatry and Psychiatric Epidemiology, 43*(8), 667-672. doi:10.1007/s00127-008-0345-x

Beiter, R., Nash, R., McCrady, M., Rhoades, D., Linscomb, M., Clarahan, M., & Sammut, S. (2015). The prevalence and correlates of depression, anxiety, and stress in a sample of college students. *Journal of affective disorders, 173*, 90-96. doi:http://dx.doi.org/10.1016/j.jad.2014.10.054

Brown, P. (2016). *The invisible problem? Imroving students' mental health*. Retrieved from Higher Education Policy Institute

Bukhari, S. R., & Afzal, F. (2017). Perceived Social Support predicts Psychological Problems among University Students. *The International Journal of Indian Psychology*, *4*(2), 2349-3429.

Camara, M., Bacigalupe, G., & Padilla, P. (2017). The role of social support in adolescents: are you helping me or stressing me out? *International Journal of Adolescence and Youth*, *22*(2), 123-136. doi:10.1080/02673843.2013.875480

Camara, M., & Padilla, G. B. P. (2017). The role of social support in adolescents: are you helping me or stressing me out? *International Journal of Adolescence and Youth*, *22*(2), 123-136. doi:http://dx.doi.org/10.1080/02673843.2013.875480

Canty-Mitchell, J., & Zimet, G. D. (2000). Psychometric properties of the Multidimensional Scale of Perceived Social Support in urban adolescents. *Am J Community Psychol*, *28*(3), 391-400. doi:10.1023/A:1005109522457

Chen, L., Wang, L., Qiu, X. H., Yang, X. X., Qiao, Z. X., Yang, Y. J., & Liang, Y. (2013). Depression among Chinese University Students: Prevalence and Socio-Demographic Correlates. *Plos One*, *8*(3). doi:10.1371/journal.pone.0058379

Chu, P. S., Saucier, D. A., & Hafner, E. (2010). Meta-Analysis of the Relationships between Social Support and Well-Being in Children and Adolescents. *Journal of Social and Clinical Psychology*, *29*(6), 624-645.

Dafaalla, M., Farah, A., Bashir, S., Khalil, A., Abdulhamid, R., Mokhtar, M., . . . Abdalrahman, I. (2016). Depression, Anxiety, and Stress in Sudanese Medical Students: A Cross Sectional Study on Role of Quality of Life and Social Support. *American Journal of Educational Research*, *4*(13). doi:http://pubs.sciepub.com/education/4/13/4

Department of Education. (2016). *Participation Rates In Higher Education: Academic Years 2006/2007 – 2014/2015 (Provisional)*. Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/552886/HEIPR_PUBLICATION_2014-15.pdf:

Dollete, S., & Phillips, M. (2004). Understanding girls' circle as an intervention on perceived social support, body image, self-efficacy, locus of control and self-esteem. *The Journal of Psychology, 90*(2), 204-215.

Friedlander, L. J., Reid, G. J., Shupak, N., & Cribbie, R. (2007). Social support, self-esteem, and stress as predictors of adjustment to university among first-year undergraduates. *Journal of College Student Development, 48*(3), 259-274. doi:DOI 10.1353/csd.2007.0024

Glozah, F. N. (2013). Effects of academic stress and perceived social support on the psychological wellbeing of adolescents in Ghana. *Open Journal of Medical Psychology, 2*, 143-150. doi:http://dx.doi.org/10.4236/ojmp.2013.24022

Goebert, D., Thompson, D., Takeshita, J., Beach, C., Bryson, P., Ephgrave, K., . . . Tate, J. (2009). Depressive Symptoms in Medical Students and Residents: A Multischool Study. *Academic Medicine, 84*(2), 236-241.

Hamdan-Mansour, A. M., & Dawani, H. A. (2008). Social Support and Stress Among University Students in Jordan. *International Journal of Mental Health and Addiction, 6*(3), 442–450. doi:DOI 10.1007/s11469-007-9112-6

Ibrahim, A. K., Kelly, S. J., Adams, C. E., & Glazebrook, C. (2013). A systematic review of studies of depression prevalence in university students. *J Psychiatr Res, 47*(3), 391-400. doi:10.1016/j.jpsychires.2012.11.015

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9: validity of a brief depression severity measure. *J Gen Intern Med, 16*(9), 606-613.

Kugbey, N. (2015). The Influence of Social Support on the Levels of Depression, Anxiety and Stress among Students in Ghana. *Journal of Education and Practice, 6*(25).

Larcombe, W., Finch, S., Sore, R., Murray, C. M., Kentish, S., Mulder, R. A., . . . Williams, D. A. (2016). Prevalence and socio-demographic correlates of psychological distress among students at an Australian university. *Studies in Higher Education, 41*(6), 1074-1091. doi:10.1080/03075079.2014.966072

Lenz, B. (2001). The transition from adolescence to young adulthood: a theoretical perspective. *J Sch Nurs, 17*(6), 300-306. doi:10.1177/10598405010170060401

Leykin, Y., & DeRubeis, R. J. (2010). Decision-making styles and depressive symptomatology: Development of the Decision Styles Questionnaire. *Judgment and Decision Making, 5*(7), 505-515.

Michael, Bowers, ColleenTerzian, Hunsberger, B., & Bruce. (2000). Facilitaing the transition to university: evaluation of a social support discussion intervention program. *Journal of College Student Development,, 41*(4), 427.

Othieno, C. J., Okoth, R. O., Peltzer, K., Pengpid, S., & Malla, L. O. (2014). Depression among university students in Kenya: Prevalence and sociodemographic correlates. *Journal of affective disorders, 165*, 120-125. doi:10.1016/j.jad.2014.04.070

Ramezankhani, A., Gharlipour, Z., Heydarabadi, A. B., Tavassoli, E., Motaleb, M., Barekati, H., . . . Moosavi, S. A. (2013). Perceived social support, depression, and perceived stress in university students. *Journal of Paramedical Sciences, 4*(4). doi:http://journals.sbmu.ac.ir/jps/article/viewFile/4846/4299

Rehabilitation Measures Database. (2014). WHO Quality of Life-BREF (WHOQOL-BREF), Asseses quality of life (QOL) within the context of an individual's culture, value systems, personal goals, standards and concerns. .

Roberts, S. J., Glod, C. A., Kim, R., & Hounchell, J. (2010). Relationships between aggression, depression, and alcohol, tobacco: Implications for healthcare providers in student health. *Journal of the American Academy of Nurse Practitioners, 22*(7), 369-375. doi:10.1111/j.1745-7599.2010.00521.x

Robotham, D. (2008). Stress among higher education students: towards a research agenda. *Higher Education, 57*(1), 735-746. doi:doi:10.1007/s10734-008-9137-1

Rose, A. J., & Rudolph, K. D. (2006). A review of sex differences in peer relationship processes: potential trade-offs for the emotional and behavioral development of girls and boys. *Psychol Bull, 132*(1), 98-131. doi:10.1037/0033-2909.132.1.98

Rueger, S. Y., Malecki, C. K., Pyun, Y., Aycock, C., & Coyle, S. (2016). A Meta-Analytic Review of the Association Between Perceived Social Support and Depression in Childhood and Adolescence. *Psychol Bull, 142*(10), 1017-1067. doi:10.1037/bul0000058

Safree, M. A., & Dzulkifli, M. A. (2010). The Relationship between Social Support and Psychological Problems among Students. *International Journal of Business and Social Science, 1*(3).

Steptoe, A., Tsuda, A., & Tanaka, Y. (2007). Depressive symptoms, socio-economic background, sense of con- trol, and cultural factors in university students from 23 countries. *International journal of behavioral medicine, 14*, 97–107.

Steptoe, A., Tsuda, A., Tanaka, Y., & Wardle, J. (2007). Depressive symptoms, socio-economic background, sense of control, and cultural factors in university students from 23 countries. *International journal of behavioral medicine, 14*(2), 97-107.

Tahmasbipoura, & Taheri. (2012). A survey on the relation between social support and mental health in students Shahid Rajaee University. *Cyprus International*

Conference on Educational Research (Cy-Icer-2012), 47, 5-9. doi:10.1016/j.sbspro.2012.06.603

Thombs, B. D., Benedetti, A., Kloda, L. A., Levis, B., Nicolau, I., Cuijpers, P.,…Steele, R. . (2014). The diagnostic accuracy of the PatientHealth Questionnaire-2 (PHQ-2), Patient HealthQuestionnaire-8 (PHQ-8), and Patient HealthQuestionnaire-9 (PHQ-9) for detecting majordepression: protocol for a systematic review andindividual patient data meta-analyses., *3*, 124-139.

Wörfel, F., Gusy, B., Lohmann, K., Töpritz, K., & Kleiber, D. (2016). Mental health problems among university students and the impact of structural conditions. *Journal of Public Health, 24*(2), 125-133. doi:10.1007/s10389-015-0703-6

World Health Organisation. (1998). Development of the World Health Organisation WHOQOL-BREF quality of life assessment. *Psychological Medicine., 28*, 551-558.

World Health Organisation. (2016). *Preventing depression in the WHO European Region*. Retrieved from http://www.euro.who.int/__data/assets/pdf_file/0003/325947/Preventing-depression-2016.pdf?ua=1:

Zhang, Y., Qu, B., Lun, S. S., Wang, D. B., Guo, Y., & Liu, J. (2012). Quality of Life of Medical Students in China: A Study Using the WHOQOL-BREF. *Plos One, 7*(11). doi:ARTN e49714

10.1371/journal.pone.0049714

Zimet, Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment, 52*(1), 30-41. doi:DOI 10.1207/s15327752jpa5201_2

Table 1: Characteristics of the sample

Variable	No depression (n= 309)	Mild to Moderate depression (n= 95)	Moderately Severe to Severe (n= 57)
Gender			
Female	81.2% (251)	81.1% (77)	87.7% (50)
Age (years)			
18-19	40.5%(125)	38.9%(37)	33.3%(19)
20-21	44.7%(138)	41.1%(39)	45.6%(26)
22-23	8.4%(26)	7.4%(7)	12.3%(7)
24-51	6.5%(20)	12.6%(12)	8.8%(5)
Year of study			
First Year 1 (undergraduate)	37.5%(116)	34.7%(33)	31.6%(18)
Second Year 2 (undergraduate)	33.0%(102)	26.3%(25)	36.8%(21)
Third Year 3 (undergraduate)	21.0%(65)	29.5%(28)	22.8%(13)
Fourth Year 4	1.6%(5)	4.2%(4)	-
Postgrad	6.8%(21)	5.3. %(5)	7.0%(4)

Moved away from home			
Yes	91.3%(282)	92.6%(88)	93.0%(53)
No	8.7%(27)	7.4%(7)	7.0%(4)
Employed			
Yes	25.9%(80)	31.6%(30)	24.6%(14)
No	74.1%(229)	68.4%(65)	75.4%(43)

Table 2: Mean scores comparison for depression groups by social support and quality of life

Variable	No depression group (1)	Mild to Moderate depression group (2)	Moderately Severe to Severe group (3)	P-Value	Comparison Groups	Post Hoc Test
Support (Significant others)	*M*=22.25 (SD 5.52)	*M*=20.05 (SD 5.71)	*M*=20.08 (SD 6.71)	.001*	1 VS 2 1 VS 3 2 VS 3	.003* .024* .999
Friends	*M*=22.32 (SD 4.73)	*M*=19.61 (SD 4.58)	*M*=17.82 (SD 5.58)	.000*	1 VS 2 1 VS 3 2 VS 3	.000* .000* .070
Family	*M*=22.41 (SD 5.18)	*M*=19.36 (SD 6.33)	*M*=18.68 (SD 6.19)	.000*	1 VS 2 1 VS 3 2 VS 3	.000* .000* .744

QoL (Psychological)	*M*=21.37 (SD 3.60)	*M*=16.45 (SD 3.50)	*M*= 13.19 (SD=3.67)	.000*	1 VS 2 1 VS 3 2 VS 3	.000* .000* .000*
(Social relationships)	*M*=11 (SD 2.49)	*M*=9.81 (SD 2.40)	*M*=8.73 (SD 2.86)	.000*	1 VS 2 1 VS 3 2 VS 3	.000* .000* .031*

Table 3: Correlations of depression, social support, and quality of life

Variables	**Depression**	**Support (Significant Others)**	**Support (Family)**	**Support (Friend)**	**QoL (Psychological)**	**QoL (Social relationships)**
Depression	-	-.194**	-.343**	-.387**	-.734**	-.350**
Support (Significant others)	-.194**	-	.284**	.343**	.266**	.574**
Support (Family)	-.343**	.284**	-	.366**	.401**	.304**
Support (Friends)	-.387**	.343**	.366**	-	.460**	.485**
QoL (Psychological)	-.734**	.266**	.401**	.460**	-	.472**
QoL (Social relationships)	-.350**	.574**	.304**	.485**	.472**	-

*Significant at the 0.01 level.

Table 4: Predictors of depressive symptoms and quality of life (Hierarchical Multiple Regression)

Variable	Depressive Symptoms & Quality of Life Domains							P-Value
	Unadjusted R^2	Adjusted R^2	ΔR^2	B	SE B	βStandardised	f^2	
Model 1 (Step 1)	0.016	0.006	.016				0.000	.186
Gender				.825	.686	.056		.230
Age				.207	.099	.122		.038*
Year of study				-.327	.279	-.065		.242
Moved away from home				-1.837	1.038	-.089		.077
Employed				-.512	.616	-.040		.406
Step 2	0.215	0.201	.199				0.244	
Gender				1.403	.618	.095		.024*
Age				.154	.090	.091		.087

Year of study				-.329	.250	-.065		.189
Moved away from home				-1.761	.938	-.086		.061
Employed				-.311	.552	-.024		.573
Support Significant others Family Friends				-.020 -.224 -.337	.045 .045 .052	-.020 -.228 -.304		.658 .000* .000*
Model 2 (step 1)	0.015	0.004	.015				0.000	
Gender				-.866	.570	-.071		.130
Age				-.037	.082	-.026		.655
Year of study				-.288	.231	-069		.214
Moved away from home				1.366	.862	.080		.114
Employment				-.151	.511	-.014		.768

Step 2	0.302	0.290	.287				0.402	
Gender				-1.469	.484	-.120		.003*
Age				.024	.070	.017		.727
Year of study				-.293	.196	-.070		.135
Moved away from home				1.170	.734	.069		.112
Employment				-.359	.432	-.034		.406
Support Significant others Family Friends				.062 .214 .320	.035 .035 .041	.077 .264 .347		.075 .000* .000*
Model 3 (step1)	0.014	0.004	.014				0.000	
Gender				.351	.322	.051		.276
Age				.-.096	.047	-.121		.040*
Year of study				.156	.131	.066		.232

Moved away from home				.748	.486	.078		.125
Employment				.045	.288	.008		.876
Step 2	0.430	0.420	.416				0.717	
Gender				-.090	.247	-.013		.714
Age				-.035	.036	-.044		.327
Year of study				.144	.100	.061		.149
Moved away from home				.179	.374	.019		.633
Employment				-.096	.220	-.016		.662
Support Significant others Family Friends				.204 .029 .162	.018 .018 .021	.448 .063 .311		.000* .108 .000*

*Significant at the 0.05 level.

Chapter 2

Appendix 2.1: Information sheet

Social and Emotional Wellbeing of University Students: The impact of childhood adversity
The SoWise Study
Information sheet for participants

Information about the survey:

This survey aims to examine risk and resilience for social and emotional wellbeing in people attending university. We know that childhood adversity (for example bullying) can have lasting effects on a person's mental health into adulthood (for example increased risk of depression), as well as affecting relationships and engagement in education.

In 2015 the National Union of Students (NUS) reported that 20% of students experience mental health difficulties while at university. Durham University is committed to the welfare of its students and ensuring they can reach their full potential The purpose of this survey is to determine the level of support that students at Durham University need, with the aim of providing better quality and more timely services for those students in need. This study is run by the Mental Health Research Group of Durham University and has the support of the Durham Students Union and Durham University Counselling Service.

Outcomes from this survey will provide information on the effect of childhood adversity on academic performance and relationships (for example, family or friends) and what factors can influence this. It is suggested that if such factors are ignored it could lead to lower university inclusion (for example a lower education achievement, less likely to be employed and/or poor relationships) and mental health problems.

Why am I being invited to take part?

You are being invited to take part because you are over 18 years of age and registered as a student at Durham University and your input is valued.

Your participation in this research study is voluntary. You may choose not to participate. If you decide to participate in this research survey, you may withdraw at any time. If you decide not to participate in this study or if you withdraw from participating at any time, you will not be penalized.

What will I need to do if I take part?

The procedure involves filling an online survey that will take approximately 25 minutes. The survey questions will be about your mental health and wellbeing.

If I take part will all the information be kept anonymous and confidential?

All data within this survey are confidential. At the end of the survey you will be asked for your email address. We ask this for two reasons: 1) to enter you into a prize draw to win one of four £50 Amazon vouchers or an IPAD, and 2) to ask for your consent to contact you in 12 months to participate in a follow-up study.

If you consent for us to contact you the primary researchers will be required to match your email address to your overall score on one of the questions in the survey (related to depression levels) and will be highlighted in the survey. No other part of the survey will be matched to your email address. This is the only part of the survey that will be identifiable to the primary researchers. If you do not consent to be contacted all responses remain anonymous and are stored separately to

your email address. In 12 months when a researcher contacts you via email and you have changed your mind about taking part, you have the right to withdraw.

Not consenting to be contacted in the future does not preclude you from being entered into the prize draw.

All data is stored on a secure server and in accordance with Qualtrics data privacy and security statements (for further information see http://www.qualtrics.com/privacy-statement/ and http://www.qualtrics.com/security-statement/). To help protect your confidentiality, the surveys will not contain information that will personally identify you, other than that stated above. The results of this study will be used for scholarly purposes and to help identify areas where Durham University could improve its student's social and emotional wellbeing.

This research has been reviewed by the School of Medicine, Pharmacy & Health Ethics Board and the Department of Psychology Ethics Board, both of Durham University.

What are the possible benefits of taking part?
By taking part in this survey you are helping provide information that will allow Durham University to better protect the social and emotional wellbeing of its students. Only by understanding the impact of adversities on current and future mental health and academic performance, can we provide more tailored services for the student population.

What are the possible disadvantages of taking part?
There may be individual instances where certain questions may be upsetting. If at any point you feel distressed then please contact one of the helplines/services listed at the end of this information sheet.

Who do I contact if I want further information about the survey?
If you have any questions about the research study, please contact Mr Mohammed Alsubaie (mohammed.m.alsubaie@durham.ac.uk) Dr Helen Stain (helen.stain@durham.ac.uk) or Dr Lisa Webster (l.a.d.webster@durham.ac.uk).

How will I give my consent to participate?

When you click on the link to the survey you will be provided with all the information located here and be asked the following:

2.2 ELECTRONIC CONSENT: Please select your choice below.

Clicking on the "agree" button below indicates that:

• you have read the above information
• you voluntarily agree to participate
• you are at least 18 years of age and a registered student at Durham University

If you do not wish to participate in the research study, please decline participation by clicking on the "disagree" button.

○ **agree** ○ **disagree**

2.3 Help lines:

Durham University Colleges
There are several sources of help in College - please check with your own College for details

- All Colleges have Student Support Staff www.dur.ac.uk/colleges.board/local/studentsupport/ who are there to oversee your welfare
- Many Colleges have Chaplains www.dur.ac.uk/directory/units/student/chaplains/
- Undergraduates are allocated a Personal Tutor/Mentor in first year
- College Porters are able to offer information and help

Durham University Counselling Service
Durham Campus: 0191 334 2200
Queen's Campus: 0191 334 0039
Nightline

www.dur.ac.uk/nightline/

Run by students for students. Two Nightline volunteers are available every night of term from 9pm to 7am to chat about anything you like. To contact Nightline -

- Phone: Their number is on the back of your campus card
- IM: You can Instant Message (see their website for instructions)
- Visit: Their office is behind the Dun Cow Pub on Old Elvet

Students Against Depression

A self-help site written specifically for students experiencing depression
www.studentsagainstdepression.org

Mental Health Matters

Telephone support from Counsellors
Stockton: 0800 052 7349 - 6.00pm - 6.00am 7 days a week
Middlesbrough: 0800 052 7350 - 6.00pm - 6.00am
Email: helpline@mhmh.co.uk
www.mentalhealthmatters.com

Talking Changes

Offers a range of talking therapies which are free of charge in County Durham and Darlington area.
North Durham Telephone: 0191 374 0044
South Durham & Darlington Telephone: 01388 646831

Tees Time to Talk

Offers a range of talking therapies in the Teesside area
Telephone: 01642 221910
Monday-Friday 9.00am - 5.00pm

Do I have to take part?

You do not have to take part in this survey if you do not wish to. We ask that if you do consent to the survey to try and answer every question as honestly as possible.

What do I do now?

Consider the above information and follow the instructions starting with whether you agree or disagree to take part.

THANK YOU IN ADVANCE

2.4 Recruitment Email:

In 2015 the National Union of Students (NUS) reported that 20% of students experience mental health difficulties while at university.

Durham University is committed to the welfare of its students and ensuring they can reach their full potential.

We are conducting a survey to determine the level of support that students at Durham University need, with the aim of providing better quality and more timely services for those students in need.

Please click on the link below to take part and have the chance to win an IPAD or one of four £50 Amazon vouchers!!

THANK YOU

2.5. DEMOGRAPHIC VARIABLES

Age (years): …….

Gender: M/W

Gender orientation:……. Drop down list (man, woman, others)

Primary language:…….(English, others)

Religious beliefs:……

Indicate category of employments status of parent/guardian (primary earner only):

1.1 Large employers and higher managerial and administrative occupations
1.2 Higher professional occupations
2 Lower managerial, administrative and professional occupations

3 Intermediate occupations
4. Small employers and own account workers

5. Lower supervisory and technical occupations

6. Semi-routine occupations

7. Routine occupations

8. Never worked and long-term unemployed

Please indicate highest level of education attained of primary earner in family:

1) Higher Education & professional/vocational equivalents,

2) A levels, vocational level 3 and equivalents

3) GCSE/O Level grade A*-C, vocational level 2 and equivalents

4) Qualifications at level 1 and below

5) Other qualifications: level unknown (including foreign qualifications)

6) No qualifications

Please state your family postcode:

……..

Student status – Foundation student yes/no

undergraduate yes/no year 1/ year 2/ year 3 / year 4

Postgraduate yes/no

Department: (drop down list)

Name of Durham University College: (drop down list)

Have you moved out of your home area to study at Durham University? Yes/no

If YES are you an international student: Yes/No

Are you in any form of employment whilst undertaking your studies? Yes/no

Previous access to mental health services: yes/no

Instruments

2.6 Academic Performance (Academic Self Efficacy Scale- ASES)

The following questions ask you about your belief in your own capabilities as a student.

Please indicate how true each of the following statements are for you.

	1-7 Very Untrue						Very True
(1) I know how to schedule my time to accomplish my academic tasks.	1	2	3	4	5	6	7
(2) I know how to take notes in college classes.	1	2	3	4	5	6	7
(3) I know how to study to perform well on college tests.	1	2	3	4	5	6	7
(4) I am good at researching and writing college level papers.	1	2	3	4	5	6	7
(5) I am a very good student.	1	2	3	4	5	6	7
(6) I usually do very well in school and at academic tasks.	1	2	3	4	5	6	7
(7) I typically find my academic work interesting and absorbing.	1	2	3	4	5	6	7
(8) I am very capable of succeeding at the university.	1	2	3	4	5	6	7

2.7 WHOQOL-BREF Questionnaire

These questions ask how you feel about your life in general. We ask that you think about your life in the ***last two weeks.***

In the last 2 weeks….	**Not at all**	**A little**	**Moderately**		**Mostly Completely**
How much do you enjoy life?	1	2	3	4	5
To what extent do you feel your life to be meaningful?	1	2	3	4	5
How well are you able to concentrate?	1	2	3	4	5
Are you able to accept your bodily appearance?	1	2	3	4	5
How satisfied are you with yourself?	1	2	3	4	5
How often do you have negative feelings such as blue mood, despair, anxiety, depression?	1	2	3	4	5
How satisfied are you with your personal relationships?	1	2	3	4	5
How satisfied are you with your sex life?	1	2	3	4	5
How satisfied are with the support you get from your friends?	1	2	3	4	5

2.8 The Multidimensional Scale of Perceived Social Support (MSPSS)

These questions are about any relationships you may have in your life.

In general I feel…….

Very Strongly	**Neutral**	**Very Strongly**	**Disagree**				**Agree**
1. There is a special person who is around when I am in need.	1	2	3	4	5	6	7
2.There is a special person with whom I can share my joys and sorrows.	1	2	3	4	5	6	7
3. My family really tries to help me.	1	2	3	4	5	6	7
4. I get the emotional help and support I need from my family.	1	2	3	4	5	6	7
5. I have a special person who is a real source of comfort to me.	1	2	3	4	5	6	7
6. My friends really try to help me.	1	2	3	4	5	6	7
7. I can count on my friends when things go wrong.	1	2	3	4	5	6	7
8.I can talk about my problems with my family.	1	2	3	4	5	6	7
9.I have friends with whom I can share my joys and sorrows.	1	2	3	4	5	6	7
10. There is a special person in my life who cares about my feelings.	1	2	3	4	5	6	7
11. My family is willing to help me make decisions.	1	2	3	4	5	6	7
12. I can talk about my problems with my friends.	1	2	3	4	5	6	7

2.9. Childhood Experience of Care and Abuse Questionnaire (CECA.Q)

Please see the following link for the full PDF version of this scale as it cannot be adjusted into this document
(https://pdfs.semanticscholar.org/d650/fa13a63885887d990cbe78e9cde8f32b4009.pdf).

2.10: List of Threatening Experiences Questionnaire (LTEQ)

The following questions cover specific lifetime events that people often experience as stressful. Please take your time to answer each question.

Please indicate whether any of the events listed below have happened to you in the *last 12 months* by ticking YES or NO after each item. If any event does not apply to you, tick NO for that item.

In the last 12 months…..	**YES**	**NO**
In the last 12 months has a close relative or family member been hospitalised or needed to take a month off work or school because they have BECOME seriously ill or been injured?	□	□
In the last 12 months has a member of your family died (e.g. parent, brother, wife child)?	□	□
In the last 12 months has any other relative or close friend died?	□	□
In the last 12 months have arguments or marital difficulties with your partner worsened?	□	□
In the last 12 months have you become separated from your partner or had a relationship breakdown?	□	□
In the last 12 months have you begun to have serious arguments or problems with someone who lives in the same household?	□	□
In the last 12 months have you become to have serious arguments or problems with a close friend, neighbour or relative NOT living in the same household?	□	□
In the last 12 months have you BECOME unemployed AND been seeking work for a month or more?	□	□
In the last 12 months have you been sacked or downgraded at work?	□	□
In the last 12 months have you had a major financial crisis?	□	□
In the last 12 months have you been involved in an accident that carried serious risk to the health or life of yourself or others?	□	□
In the last 12 months have you been involved in a court case?	□	□
In the last 12 months has some other adverse event occurred?	□	□

2.11 Patient Health Questionnaire 9 (PHQ-9)

Over the last 2 weeks how often have you been bothered by any of the following problems:

	Not at all	**Several days**	**More than half the days**	**Nearly every day**
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself – or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper of watch TV	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead or hurting yourself in some way	0	1	2	3

THANK YOU FOR COMPLETING THE SURVEY

2.12 Ethical approval

Durham University
School of Medicine, Pharmacy and Health

Shaped by the past, creating the future

Dr David Ekers
Clinical Senior Lecturer
Chair, School of Medicine, Pharmacy and Health Ethics Sub-Committee

Mohammed Alsubaie
School of Medicine, Pharmacy and Health
Durham University

Friday, 6th May 2016
Dear Mohammed

Re: Ethics Application ESC2/2016/MSC03

'Adversity, and sources of social support as risk and promotive factors of the mental health and wellbeing in university students'

Thank you for sending the above application to the School of Medicine, Pharmacy and Health Ethics Sub-Committee for ethical review. The project was reviewed at a meeting on *(Wednesday, 27th April 2016).* The committee requested some changes to the application, and I have now reviewed these as Chair. I am satisfied that all of the comments made by the committee have been addressed and I am therefore pleased to confirm Durham University ethical approval for the study. This approval is given on the following basis:

- Please ensure that data generated for this study is maintained and destroyed as outlined in this proposal and in keeping with the Data Protection Act.
- If you make any amendments to your study, these must be approved by the School committee prior to implementation.
- At the end of the study, please submit a short end of study report (ESC3 form) to the School ethics committee.

Please do not hesitate to contact me should you have any questions. Good luck, I hope that the study goes well.

With best wishes,

David Ekers

Appendix Chapter 3

3.1 participant information sheet

Participant Information Sheet

Study Title: The influence of dissociation on wellbeing and academic performance in university students- a subsample from Study 1

Name of Investigator: Mohammed Alsubaie, PhD Student in the Mental Health Research Centre, Durham University.

I would like to invite you to take part in my research study. Before you decide I would like you to understand why the research is being done and what it would involve for you. I will go through the information sheet with you and answer any questions you have either by the time of the interview or before via email. Ask me if there is anything that is not clear. Thank you for reading this.

This study aims to examine the risk factors for the emotional wellbeing of students at Durham University with a focus on dissociative disorder and its link to factors such adverse experiences, depression, and the possible impact on outcomes such as academic performance. It is well known that the adversity experienced by children has long-term effects on mental health including risk for depression. It also affects the educational outcomes of students. Also, this study will look at the role of resilience and social support as protective factors of students' wellbeing.

This research will be contained an interview either by telephone or face to face (optional), and will be completed within a maximum time of 45 minutes in one session.

What is the purpose of the study?

The main purpose of this study is to enhance the knowledge base in this particular field and to explore factors impacting on the mental health and academic performance of university students. The secondary aim of this study is to determine the support level required by students so as to improve the university experience and provide them with better services.

It is important to note that the researcher is not a clinician, and this study is only for research purposes, so you will not receive any sort of professional help. However, an 'on call' clinician will be available each time an interview is conducted in case there is need for immediate help. Also, it is preferable to bring a friend to the interview or have a friend on standby if you prefer that.

Why invite me to participate?

You are invited to participate in this study as you have completed the SoWise survey, and consented to be contacted in the future for further studies. Also, you are invited to participate as you reported experience of low mood and experience of childhood adversity in the online survey (SoWise). Your contribution is highly valued.

Do I have to take part?

Participation is completely voluntary and you can decide whether or not you want to take part in the study. You will not be asked to provide a reason if you do not want to take part. If you do decide to take part, you will be given this information sheet to read and complete the consent form provided. Even if you do decide to take part, you are still free to withdraw at any time during the interview without giving any reason. If you do decide to stop taking part your data will not be used in the study, and you will not be asked for further information.

What will be my role upon taking part?

If you agree to participate in this study the procedure will involve an interview that will run for a maximum time of 45 minutes, either by telephone or face-to-face with me (optional). It will cover your wellbeing and mental health with a focus on depression. The researcher will provide you with the study information sheet (including information about your right to withdraw at any point), which you will be given time to read and the opportunity to ask questions. Then, the researcher will provide a consent form for you to sign for consent in the case of face to face interviews. For telephone interviews you will provide a verbal recorded consent via telephone and later a written consent will be gathered when you meet with the researcher to collect the£10.

After the consent has been given, you will be asked to complete a questionnaire about your thoughts and experiences during your lifetime. This part will take no more than 10 minutes. The second part will be an interview asking about your experiences of depression using The Structured Clinical Interview (SCID-5-RV) with a maximum time of 30 minutes.

The study will take a maximum of 45 minutes of your time, and will be completed in one session.

What is the confidentiality of all the information if I choose to participate?

All information you provide in this study will remain confidential and anonymous so that no individual can be identified. Information will be stored securely on a password protected university server. The signed consent forms and documentation files will be stored in locked cabinet in a secure office. Only the researcher and his supervisors will have access to the information. Results will be publicised on a group level with de-identified data so that no individual participant can be identified

How can I possibly benefit from participating?

Although you might not benefit directly from this study your participation will enhance the knowledge base in the field thus provide information for Durham University to improve its protection of students' emotional and social wellbeing. We can only be in a position to offer the student population with more tailored services if we understand the effect of childhood adversities on academic performance and mental health, both at present and in the future.

Expenses and payments:

Upon completion of the interview you will receive£10 in cash immediately if you have face to face interview, if you have telephone interview we will arrange a meeting to give you the £10 as a reasonable recompense for your time and contribution.

What are the potential disadvantages of participating?

It is possible to have individual instances in which certain questions may upset you, during the interview. If in the course of your participation you experience distress please ask the interviewer to assist you in obtaining help. He will provide you with a list of helplines, and the interview will be terminated at this point if necessary. If there is a need for immediate help during the interview an 'on call' clinician will be available. Also, at any time you can withdraw from the study without giving any reason and without penalty.

What are the ways of giving consent to participate?

The researcher will provide a consent form for you to sign in the case of face to face Interviews. For telephone interviews you will provide a verbal recorded consent via telephone and later when you meet with the researcher to collect the £10 you will be asked to sign a written consent form.

What will happen to the result of the research study?

The study results will be used as a part of PhD thesis and only for scholarly purposes (publication, conferences..etc) to enhance the knowledge base of factors impacting on the mental health and academic performance of university students and will assist in identifying aspects in student's emotional and social wellbeing that Durham University could improve. The study findings will be available on the school website https://www.dur.ac.uk/school.health/ when it is published.

Who has reviewed the study?

This study has been reviewed and approved by the School of Medicine Pharmacy and Health Ethics Committee, Durham University.

Who is organising and funding the research?

This study is part of research funded by the Durham University.

What if something goes wrong? Who can I complain to?

If you have any comments about the researcher's behavior or anything to do with the study, you can contact the researcher's supervisor, Dr. Helen Stain. School of Medicine, Pharmacy and Health

Wolfson Research Institute, Queen's Campus, Stockton on Tees, TS17 6BHTelephone: +44 (0) 191 33 40673, email at helen.stain@durham.ac.uk

Who to contact if you require further information?

If you have any concern please contact either myself or my supervisor;

Mohammed Alsubaie

E113A, Wolfson Building,

Durham University Queen's Campus,

Thornaby,

Stockton-on-Tees,

TS17 6BH

Telephone: +44 (0) 191 33 40791

Phone Number: +447402406049

Email: mohammed.m.alsubaie@durham.ac.uk

Dr. Helen Stain

Email: helen.stain@durham.ac.uk

Telephone: +44 (0) 191 33 40673

Thank you for taking time to read this information.

Appendix 3.2 Consent Form

Durham University

CONSENT FORM

Study Title: (The Impact of Childhood Adversity on Depression and Academic Functioning)

Please initial the boxes to confirm you agree with each statement

1. I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason. ☐

3. I understand that by taking part in this research I will be interviewed and I agree that the interview can be audio recorded. ☐

5. I agree and understand that my data from the online survey will be used in the above study. ☐

6-I understand that my data will be stored and kept confidential, and I agree to the use of my de-identified data when this research is published. ☐

7-. I agree to take part in the above study. ☐

Name of Participant:

Date

Signature

Name of Person taking consent (Researcher):

Date:
Signature:

Appendix 3.3: List of Helplines

List of Helplines:(gathered from SoWise study)

Durham University Colleges

There are several sources of help in College - please check with your own College for details

- All Colleges have Student Support Staff **www.dur.ac.uk/colleges.board/local/studentsupport/** who are there to oversee your welfare
- Many Colleges have Chaplains **www.dur.ac.uk/directory/units/student/chaplains/**
- College Porters are able to offer information and help

Durham University Counselling Service

Durham Campus: 0191 334 2200

Queen's Campus: 0191 334 0039

Nightline

www.dur.ac.uk/nightline/

Run by students for students. Two Nightline volunteers are available every night of term from 9pm to 7am to chat about anything you like. To contact Nightline -

- Phone: Their number is on the back of your campus card
- IM: You can Instant Message (see their website for instructions)
- Visit: Their office is behind the Dun Cow Pub on Old Elvet

Students Against Depression: A self-help site written specifically for students experiencing depression

www.studentsagainstdepression.org

Mental Health Matters

Telephone support from Counsellors
Stockton: 0800 052 7349 - 6.00pm - 6.00am 7 days a week
Middlesbrough: 0800 052 7350 - 6.00pm - 6.00am
Email: helpline@mhmh.co.uk
www.mentalhealthmatters.com

Talking Changes

Offers a range of talking therapies which are free of charge in County Durham and Darlington area.
North Durham Telephone: 0191 374 0044
South Durham & Darlington Telephone: 01388 646831

Appendix 3.4 : Risk Assessment Protocol

Durham University

Risk Assessment Protocol

Introduction:

Suicidal thoughts are a serious threat for someone's life. The most common reason worldwide for suicide is depression. As this interview is focused on symptoms of depression, some participants might express suicidal thoughts. We need to know how serious these thoughts are in order to ensure participants' safety, and see if further actions are needed.

The following steps will be taken:

Part One: SCID Interview

Upon completing part one of the interview which includes 3 self-report questionnaires, a diagnostic interview will be conducted by using the SCID. Only Module A(mood disorders) will be administered to assess symptoms of depression.

1- In this section in the SCID, questions about suicidal thoughts are included. The following questions will be asked:

(i)Have things been so bad that you thought a lot about death or that you would be better off dead? Have you thought about taking your own life?

***** If participant answers NO, this will be coded "1" and no further actions regarding suicidal thoughts will be taken.

***** If participant answers YES, additional questions will be asked from the SCID as follows:

(ii)Have you done something about it? (What have you done? Have you made a specific plan? Have you taken any action to prepare for it? Have you actually made a suicide attempt?)

* If participant answers YES with any of the following criteria

- Thoughts of own death

-Suicidal ideation

- Specific plan

- Suicide attempt

The researcher then will conduct the Risk Assessment Protocol

Part Two

Risk Assessment Protocol

A potential risk of suicide has been identified for the participant based on the SCID and the risk protocol has been enacted.

Questions to ask if a potential risk of suicide has been identified for the participant based on the SCID:

The researcher will start with the following paragraph:

I see that you have mentioned that you have suicidal thoughts. These are feelings that people suffering from depression often have, but it is important to make sure that you are receiving the right kind of support. So if it is OK, I would like to ask you more questions that will explore these feelings in a little more in depth.

Plans of Suicide

1- Do you know how you would kill yourself? YES/ NO

If yes- Details

2- Have you made any actual plans to end your life? YES/ NO

If yes- Details

Actions

3- Have you made any actual preparations to kill yourself? YES/NO

If yes- Details

4- Have you ever attempted suicide in the past? YES/NO

If yes- Details

Prevention

5- Is there anything stopping you killing or harming yourself at the moment? YES/ NO

If yes- Details

6- Do you feel that there is any immediate danger that you will harm or kill yourself? YES/NO

If yes- Details

Look at answers to determine level of risk, A B or C:

Actions by the Researcher:

1-If participant answers all questions NO apart from Q5 ' Yes'

↓

A → The researcher will tell participant that It seems to me these thoughts about death are not ones you would act on- is this how you see things? (if he/she says yes) the researcher would advise him/ her to make an appointment to see his/her GP to talk about these feelings.

In this case the researcher will not transfer the participant to his supervisor.

2-If participant answers 'YES' for any one of Qs 1-4; plus 'yes' for Q5 and 'no' for Q6

↓

B1 → The researcher will complete the risk assessment form which includes participant's information (see page 5) and will tell participant that I will connect you to one of our clinicians (Applicant's supervisor) immediately with all relevant information regarding risk of suicide.

↓

Actions by the Supervisor: In this level of risk the supervisor will tell participant that things seem to be very hard for you right now and I think it would help if you were to speak to your GP about these feelings. I will be writing to your GP to tell them that you have been here today and have been having some troubling thoughts. I would also advise you to make an appointment to see your GP to talk about these feelings.

3- If participant scores 'no' to Q5 or 'yes' to Q6

↓

C Actively suicidal → The researcher will complete the risk assessment form which includes participant's information (see page 5) and will tell participant that I will connect you to one of our clinicians (Applicant's supervisor) immediately with all relevant information regarding risk of suicide.

↓

Actions by the Supervisor: In this risky level the supervisor will tell participant that I am very concerned about your safety at this moment, I am going to make some telephone calls to your GP/ Care Co-ordinator/ Crisis Management team/ the emergency services to let them know how you are feeling and to arrange for you to immediate help.

Note:

-If the interview is via telephone the researcher will make sure someone is next to him so s/he can help to contact a clinician and will tell participant that hold on I will transfer your call to one of our clinicians (Applicant's supervisor), the researcher will provide immediately his supervisor with the risk assessment form which includes participant's information with all relevant information regarding risk of suicide.

Actions to take in the case of immediate risk:

Participant needs immediate help, the researcher will not leave them alone, or if on telephone will not hang up. The researcher will contact his supervisor in order to involve her right away. Then the researcher with his supervisor will follow the series of contact below:

1- GP/out-of-hours; if not
2- Crisis team; if not
3- Clinician accompanies to A&E; if not (or interview is over telephone)
4- Call ambulance

Risk Assessment Form

Date risk protocol enacted:	Participant ID:		
Time point:			
Risk protocol has identified level of risk as:	A	B1	C
Suicide Risk Information: Report which questionnaire and the score that gave cause for concern and attach copy of risk assessment. Include whether the participant has reported any of the following: * Current suicidal ideation * Suicide plans * Active preparations to commit suicide * Protective factors or lack of them * Regular contact with GP?			
Supervisor contacted: Y/N	Date:		
Actions taken:			
Additional relevant information:			
Researcher Name:	Date:	Signature:	
Supervisor Name:	Date:	Signature:	

Appendix 3.5: Recruitment Email

Recruitment Email

I am writing to you to request your participation as you have completed the SoWise survey, and consented to be contacted in the future to take part in the interview (follow-up study). Also, you are invited to participate as you reported experience of low mood and experience of childhood adversity. I am conducted a research to look at the experience of depressive feelings in University students. This research will be contained an interview either by phone or face to face. Your contribution is highly valued and you will be rewarded 10 pounds for your time.

Times are flexible, and you can decide whatever is best for you.

See the attached Information Statement for more details.

Please let me know if you wish to participate within the following days via email, phone call or text message to arrange the interview.

Thank you very much for your time and cooperation.

Best Wishes,

Researcher

If you need any further information feel free to contact me via email mohammed.m.alsubaie@durham.ac.uk or via mobile: +44 (0) 74024060

3.6 Demographic Variables (please refer to chapter 2 appendix 2.5**)**

Appendix- Scales-Online Survey

The following scales already included in the online survey (SoWise Study-Study 1)

3.7 Academic Self efficacy: (Chemers et al,2001)

Please refer to Chapter 2 appendix page 279 for more information.

3.8 List of Threatening Experiences (LTE-Q) (Brugha, Bebbington, Tennant, & Hurry 1985)

Please refer to Chapter 2 appendix page 281 for more information.

(Appendix, Measures-Study 2)

Durham University

The Following Measures Will be Included in the Follow up Study

3.9 -Dissociative Experiences Scale - II(Carlson & Putnam, 1993)

Instructions: This questionnaire asks about experiences that you may have in your daily life. We are interested in how often you have these experiences. It is important, however, that your answers show how often these experiences happen to you when you are not under the influence of alcohol or drugs. To answer the questions, please determine to what degree each experience described in the question applies to you, and circle the number to show what percentage of the time you have the experience.

For example: 0% (Never) 10 20 30 40 50 60 70 80 90 100% (Always)

1. Some people have the experience of driving or riding in a car or bus or subway and suddenly realizing that they don't remember what has happened during all or part of the trip.
Circle the number to show what percentage of the time this happens to you.
0% 10 20 30 40 50 60 70 80 90 100%

2. Some people find that sometimes they are listening to someone talk and they suddenly realize that they did not hear part or all of what was said.
Circle the number to show what percentage of the time this happens to you.
0% 10 20 30 40 50 60 70 80 90 100%

3. Some people have the experience of finding themselves in a place and have no idea how they got there.
Circle thenumber to show what percentage of the time this happens to you.
0% 10 20 30 40 50 60 70 80 90 100%

4. Some people have the experience of finding themselves dressed in clothes that they don't remember putting on.
Circle the number to show what percentage of the time this happens to you.
0% 10 20 30 40 50 60 70 80 90 100%

5. Some people have the experience of finding new things among their belongings that they do not remember buying.
Circle the number to show what percentage of the time this happens to you.
0% 10 20 30 40 50 60 70 80 90 100%

6. Some people sometimes find that they are approached by people that they do not know, who call them by another name or insist that they have met them before.
Circle the number to show what percentage of the time this happens to you.
0% 10 20 30 40 50 60 70 80 90 100%

7. Some people sometimes have the experience of feeling as though they are standing next to themselves or watching themselves do something and they actually see themselves as if they were looking at another person.
Circle the number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

8. Some people are told that they sometimes do not recognize friends of family members.
Circle the number to show what percentage of the time this happens to you.
0% 10 20 30 40 50 60 70 80 90 100%

9. Some people find that they have no memory for some important events in their lives (for example, a wedding or graduation).
Circle the number to show what percentage of the time this happens to you.
0% 10 20 30 40 50 60 70 80 90 100%

10. Some people have the experience of being accused of lying when they do not think that they have lied.
Circle the number to show what percentage of the time this happens to you.
0% 10 20 30 40 50 60 70 80 90 100%

11. Some people have the experience of looking in a mirror and not recognizing themselves.
Circle the number to show what percentage of the time this happens to you.
0% 10 20 30 40 50 60 70 80 90 100%

12. Some people have the experience of feeling that other people, objects, and the world around them are not real.
Circle the number to show what percentage of the time this happens to you.
0% 10 20 30 40 50 60 70 80 90 100%

13. Some people have the experience of feeling that their body does not seem to belong to them. Circle the number to show what percentage of the time this happens to you.
0% 10 20 30 40 50 60 70 80 90 100%

14. Some people have the experience of sometimes remembering a past event so vividly that they feel as if they were reliving that event.
Circle the number to show what percentage of the time this happens to you.
0% 10 20 30 40 50 60 70 80 90 100%

15. Some people have the experience of not being sure whether things that they remember happening really did happen or whether they just dreamed them.
Circle the number to show what percentage of the time this happens to you.
0% 10 20 30 40 50 60 70 80 90 100%
16. Some people have the experience of being in a familiar place but finding it strange and unfamiliar.
Circle the number to show what percentage of the time this happens to you.
0% 10 20 30 40 50 60 70 80 90 100%
17. Some people find that when they are watching television or a movie they become so absorbed in the story that they are unaware of other events happening around them.
Circle the number to show what percentage of the time this happens to you.
0% 10 20 30 40 50 60 70 80 90 100%
18. Some people find that they become so involved in a fantasy or daydream that it feels as though it were really
happening to them. Circle the number to show what percentage of the time this happens to you.
0% 10 20 30 40 50 60 70 80 90 100%
19. Some people find that they sometimes are able to ignore pain. Circle the number to show what percentage of the time this happens to you.
0% 10 20 30 40 50 60 70 80 90 100%
20. Some people find that they sometimes sit staring off into space, thinking of nothing, and are not aware of the passage of time.
Circle the number to show what percentage of the time this happens to you.
0% 10 20 30 40 50 60 70 80 90 100%
21. Some people sometimes find that when they are alone they talk out loud to themselves.
Circle the number to show what percentage of the time this happens to you.
0% 10 20 30 40 50 60 70 80 90 100%
22. Some people find that in one situation they may act so differently compared with another situation that they feel almost as if they were two different people.
Circle the number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

23. Some people sometimes find that in certain situations they are able to do things with amazing ease and spontaneity that would usually be difficult for them (for example, sports, work, social situations, etc.).
Circle the number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

24. Some people sometimes find that they cannot remember whether they have done something or have just thought about doing that thing (for example, not knowing whether they have just mailed a letter or have just thought about mailing it).
Circle the number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

25. Some people find evidence that they have done things that they do not remember doing.
Circle the number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

26. Some people sometimes find writings, drawings, or notes among their belongings that they must have done butcannot remember doing.
Circle the number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

27. Some people sometimes find that they hear voices inside their head that tell them to do things or comment on things that they are doing.
Circle the number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

28. Some people sometimes feel as if they are looking at the world through a fog, so that people and objects appear far away or unclear.
Circle the number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

3.10- The Structured Clinical Interview (SCID-5-RV):

This instrument is not allowed to be made available online, permission and licence should be granted from the American Psychological Association. Please refer to method section in Chapter two for more details about this instrument (page 118). Also you can refer to the following link (https://www.appi.org/products/structured-clinical-interview-for-dsm-5-scid-5).

3.11 Ethical approval

Durham University
School of Medicine, Pharmacy and Health

Shaped by the past, creating the future

Dr David Ekers
Clinical Senior Lecturer
Chair, School of Medicine, Pharmacy and Health Ethics Sub-Committee

Mohammed Alsubaie
School of Medicine, Pharmacy and Health
Durham University

Friday, 6th May 2016
Dear Mohammed

Re: Ethics Application ESC2/2016/MSC03

'Adversity, and sources of social support as risk and promotive factors of the mental health and wellbeing in university students'

Thank you for sending the above application to the School of Medicine, Pharmacy and Health Ethics Sub-Committee for ethical review. The project was reviewed at a meeting on *(Wednesday, 27th April 2016).* The committee requested some changes to the application, and I have now reviewed these as Chair. I am satisfied that all of the comments made by the committee have been addressed and I am therefore pleased to confirm Durham University ethical approval for the study. This approval is given on the following basis:

- Please ensure that data generated for this study is maintained and destroyed as outlined in this proposal and in keeping with the Data Protection Act.
- If you make any amendments to your study, these must be approved by the School committee prior to implementation.
- At the end of the study, please submit a short end of study report (ESC3 form) to the School ethics committee.

Please do not hesitate to contact me should you have any questions. Good luck, I hope that the study goes well.

With best wishes,

David Ekers

Appendix- Chapter (4) 4.1 Participant Information Sheet

Durham University

Participant Information Sheet

Study Title: The Impact of Promotive Factors on University Students: Resilience and Adjustment.

Name of Investigator: Mohammed Alsubaie, PhD Student in the Mental Health Research Centre, Durham University.

I would like to invite you to complete an online survey. Before you decide whether to participate or not, it is important to you to understand why the research is being done and what it will involve. Please take time to read the following information. Thank you for reading this.

This research aims to examine some factors that enhance Durham University students' ability to adapt well to stressful events and new environments. Sources of such factors involve personal, family, and community resources. For example, the level of support from your parents, friends, and your University. Also, this study will look at how these factors impact the relationship between stressful life events (for example death of relative or illness), and academic performance. It is suggested that students who did not have the opportunity to benefit from such factors may experience difficulties in the course of their transition to the University, and as a result could affect their academic competence.

This research will involve an online survey and will be completed within an approximate time of 15 minutes at your convenience.

What is the purpose of the study?

The primary purpose of this survey is to define specific factors that promote positive outcomes for University students and will widen the knowledge base of these factors in more depth. In addition, this study aims to provide a summary of this information anonymously to Durham University so that they might use it to improve the university experience and its services to support students.

Why invite me to participate?

You are being asked to take part because you are aged 18 years or older, and a registered Durham University student at one of the following schools who are interested in the study: School of Medicine, Pharmacy and Health, School of Education, Psychology, and Applied Social Sciences. Your contribution is highly valued.

Do I have to take part?

Participation is entirely voluntary, and you can decide whether or not you want to take part. You will not be asked to provide a reason if you do not want to participate. Even if you do decide to participate, you are still free to withdraw at any time while you are completing the survey without giving any reason. If you do choose to stop taking part, your data will be deleted automatically, and you will not be asked for further information.

What will be my role upon taking part?

If you agree to participate in this study, the procedures will involve completing an online survey. Questions will cover specific factors contribute to resilience and therefore influence the way you adapt to the university life. For instance, your idea about your future (positive, negative), and sources of support such as your parents, University, teachers, and friends. Also, you will be asked about the stressful events experienced within last 12 months such as illness, and some questions will cover your academic performance. The survey will take a maximum of 15 minutes of your time, and will be completed at your convenience.

What is the confidentiality of all the information if I choose to participate?

All information you provide in this study will remain confidential and anonymous so that no individual can be identified. At the end of the survey, you will be asked to provide your email address. The researcher asks this just to enter you into a prize draw to win one of five £50 Amazon vouchers. You will be then given a unique ID number to keep your information anonymous.

All data is stored on a secure server and in accordance with Qualtrics data privacy and security statements (for further information see http://www.qualtrics.com/privacy-statement/ and http://www.qualtrics.com/security-statement/). To help protect your confidentiality, the surveys will not contain information that will personally identify you, and data will be downloaded and kept in a secured University network.

How can I possibly benefit from participating?

Although you might not benefit directly from this study, your participation will enhance the knowledge base about factors that help students to adapt well to University life in more depth. The researcher will provide a summary of the study findings to the University anonymously so they can be in a position to offer the student population with more tailored services and improve the University environment, which may help students to experience a successful transition to the university life, both at present and in the future.

Expenses and payments:

Upon completion of the online survey, you will be entered into a prize draw and have the chance to win one of five 50 Amazon voucher. In addition, if you are a Psychology student you will receive a poll credits for your time and contribution. Prize winners will be chosen at random. Students completed the online survey will be allocated a unique ID number, and a random drawing to select five winners will be performed using Excel program to ensure fairness and equal opportunities for all participants. A list of Psychology students including unique ID numbers + emails will be pulled out of Qualtrics software and will be given anonymously to Psychology department; all students involved in this list will be offered participant pool credits for their participation.

What are the potential disadvantages of participating?

It is possible to have individual instances in which certain questions in the survey may upset you. If in the course of your participation you feel distressed, please click on the tick box (helplines list) which is provided throughout the survey to help you, also you can download a copy if needed. In addition, at any time you can withdraw from the study without giving any reason and without penalty.

What are the ways of giving consent to participate?

When you click on the link to the survey, you will be provided with all the information located here and be asked the following:

4.2 ELECTRONIC CONSENT: Please select your choice below.

Clicking on the "agree" button below indicates that:

• You have read the above information

• You voluntarily agree to participate

• You are at least 18 years of age and a registered student at Durham University

If you do not wish to participate in the research study, please decline participation by clicking on the "disagree" button.

Agree **disagree**

What will happen to the result of the research study?

The anonymised study results will be used as a part of PhD thesis and for scholarly purposes (publication, conferences..etc) to widen the knowledge base of factors that help students to adapt well to University life in more depth. Also, a summary of the study findings will be provided to Durham University anonymously, and that could assist in identifying aspects that Durham University could improve for students. The study results will be made available on the school website https://www.dur.ac.uk/school.health/ when it is published.

Who has reviewed the study?

This study has been reviewed and approved by the School of Medicine Pharmacy and Health Ethics Committee, Durham University.

Who is organising and funding the research?

This study is part of research funded by the Durham University.

What if something goes wrong? Who can I complain to?

If you have any comments about anything to do with the study, you can contact the researcher's supervisor, Dr Alison Lane Department of Psychology. Telephone: +44 (0) 191 33 40431, Wolfson Building Room number: E017 email at a.r.lane@durham.ac.uk, also in the end of the online survey there is a section asking you when to write any comments that you have regarding your experience

Who to contact if you require further information?

If you have any concern, please contact either myself or my supervisor;

Mr Mohammed Alsubaie or Dr Alison Lane

E113A, Wolfson Building, Email: a.r.lane@durham.ac.uk

Durham University Queen's Campus, Telephone: +44 (0) 191 33 40431

Thornaby,

Stockton-on-Tees,

TS17 6BH

Telephone: +44 (0) 191 33 40791

Phone Number: +447402406049

Email: mohammed.m.alsubaie@durham.ac.uk

Thank you for taking time to read this information.

4.3 List of Help lines: please refer to chapter 2 appendix page 281 for more details.

Appendix 4.4, Recruitment Email

Recruitment Email (None psychology students)

I am writing to you to request your participation by completing an online survey. It is suggested that factors that are enhancing students' ability to adapt well to stressful events and new environments such as the level of support from parents, friends, and the university are important for young people dealing with novel demands. The lack of receiving such factors appears to have enduring effects on students' ability to have a successful university experience. I aim to define specific factors contributing to students' resilience and therefore influence the way they adapt to the university life. For instance, your idea about your future (positive, negative), also sources of support such as your parents, University, and friends. The researcher hopes this will aid Durham University to improve its services, thus planning interventions for students.

Please click on the link below to take part. Your participation is highly valued. To thank you for your time in completing the survey, you will be entered into a prize draw to win one of five £50 Amazon vouchers. This is entirely optional, and you may choose not to provide your email address, although this will be stored separately from your responses to the remainder of the survey and these will remain completely anonymous.

Thank you very much for your time and cooperation.

Researcher

If you need any further information feel free to contact me via email

mohammed.m.alsubaie@durham.ac.uk or via mobile: +44 (0) 74024060

Appendix 4.4:_ Recruitment Email

Recruitment Email (Psychology Students)

I am writing to you to request your participation by completing an online survey. It is suggested that factors that are enhancing students' ability to adapt well to stressful events and new environments such as the level of support from parents, friends, and the university are important for young people dealing with novel demands. The lack of receiving such factors appears to have enduring effects on students' ability to have a successful university experience. I aim to define specific factors contributing to students' resilience and therefore influence the way they adapt to the university life. For instance, your idea about your future (positive, negative), also sources of support such as your parents, University, and friends. The researcher hopes this will aid Durham University to improve its services, thus planning interventions for students.

Please click on the link below to take part. Your participation is highly valued. To thank you for your time in completing the survey, you will be entered into a prize draw to win one of five £50 Amazon vouchers. Also, a list of Psychology students will be pulled out of Qualtrics software and will be given anonymously to Psychology department to offer you poll credits for your participation. This is entirely optional, and you may choose not to provide your email address, although this will be stored separately from your responses to the remainder of the survey and these will remain completely anonymous.

Thank you very much for your time and cooperation.

Researcher

If you need any further information feel free to contact me via email

mohammed.m.alsubaie@durham.ac.uk or via mobile: +44 (0) 74024060

4.5 Demographic Variables: (please refer to chapter 2 Appendix page 277)

(Online Survey)

The following scales are included in the online survey

4.6- Academic Self efficacy: (Chemers et al,2001) (please refer to chapter 2 appendix page 279).

4.7 - Resilience Scale (RS14): (Wagnild& Heather M. Young, 1993)

This instrument is not allowed to be made available online, permission and licence should be granted from the resilience centre. Please refer to method section in Chapter four for more details about this instrument (page 147). Also you can refer to the following link (https://www.resiliencecenter.com/products/resilience-scales-and-tools-for-research/the-rs14/).

4.8 -University Connectedness Scale (Stallman, &Shochet,2008)

The following questions ask about your experiences at university. Please indicate to what extent each of the following statements applies to you.

Not at all----- Some of the time----------All the time
1 2 3 4 5 6 7

1 Class sizes are so large that I feel like a number.
2 The library staff are willing to help me find materials/books.
3 I feel very different from most other students here.
4 University staff have been warm and friendly.
5 I do not feel valued as a student on campus.
6 Staff have not been available to discuss my academic concerns.
7 The university seems to value diversity.
8 Sometimes I don't feel as if I belong here.
9 Staff have been available to help outside of class.
10 The university seems like a cold, uncaring place to me.
11 Staff have been available to help me make course choices.
12 I wish I were in a different university.
13 I feel as if no one cares about me personally on this campus.
14 I feel comfortable in this university environment.
15 There are support services available if I need them.
16 Lecturers and tutors are available to discuss coursework with me when required.
17 Most lecturers/tutors I have had at this university are interested in me.
18 People here know I can do good work.
19 Other students here like me the way I am.

4.9 - List of Threatening Experiences (LTE-Q) (Brugha, Bebbington, Tennant, & Hurry 1985): (please refer to chapter 2 appendix page 281).

4.10- Multidimensional Scale of Perceived Social Support:(Zimet et al., 1988) (please refer to chapter 2 appendix page280)**.**

4.11- Hopes12 Scale (Lewin et al 2008)

Please rate the following statements as appropriate to you "0: Not at all" to "4: Extremely well

1. I generally look forward to new activities and phases in my life.

2. I am the sort of person who believes that life is NOT pointless.

3. I generally believe that my life will be valuable and productive.

4. I really believe that the children of today CANNOT expect much from their future.

5. I generally believe that my future will be very active.

6. I often fear that the rest of my life will NOT be worthwhile.

7. Even when things go right, I often fear that my future is not under my control.

8. I often feel that I will be less and less comfortable with my body as time goes on.

9. I generally look forward to sharing my life with others.

10. I generally am NOT enthusiastic about my future.

11. I generally believe that I will get what I want out of life.

12. I often fear that I will NOT have the personal support that I need in future.

4.12- Coping Strategies Inventory Short-Form (CSI-SF) (Addison et al 2007)

Five item Likert Format None a little some of the time much very much

1. I make a plan of action and follow it
2. I look for the silver lining or try to look on the bright side of things
3. I try to spend time alone
4. I hope the problem will take care of itself
5. I try to let my emotions out
6. I try to talk about it with a friend or family
7. I try to put the problem out of my mind
8. I tackle the problem head on
9. I step back from the situation and try to put things into perspective
10. I tend to blame myself
11. I let my feelings out to reduce the stress
12. I hope for a miracle
13. I ask a close friend or relative that I respect for help or advice
14. I try not to think about the problem
15. I tend to criticize myself

4.13 Ethical Approval

Durham University
School of Medicine, Pharmacy and Health

Shaped by the past, creating the future

Dr Shelina Visram
Senior Lecturer
Chair, School of Medicine, Pharmacy and Health Ethics Sub-Committee

Mohammed Alsubaie
School of Medicine, Pharmacy and Health
Durham University

7 March 2017

Dear Mohammed

Re: Ethics Application ESC2/2017/MSC01
'The impact of Promotive Factors on University students: Resilience and Adjustment'

Thank you for re-submitting the above application to the School of Medicine, Pharmacy and Health Ethics Sub-Committee for proportionate ethical review. I have reviewed this project on behalf of the Ethics Sub-Committee and as no significant ethical issues were identified, and I am pleased to confirm Durham University ethical approval for the evaluation.

Please do not hesitate to contact me should you have any questions. Good luck, I hope that the study goes well.

With best wishes,

Dr Shelina Visram
Chair

References

Abdullah, M. C., Elias, H., Uli, J., & Mahyuddin, R. (2010). Relationship between coping and university adjustment and academic achievement amongst first year undergraduates in a Malaysian public university. *International Journal of Arts and Sciences, 3*(11), 379–392.

Abela, J. R., & Skitch, S. A. (2007). Dysfunctional attitudes, self-esteem, and hassles: Cognitive vulnerability to depression in children of affectively ill parents. *Behaviour Research and Therapy, 45*(6), 1127–1140. http://dx.doi.org/10.1016/j.brat.2006.09.011

Adewuya, A. O., Ola, B. A., Aloba, O. O., Mapayi, B. M., & Oginni, O. O. (2006). Depression amongst Nigerian university students. Prevalence and sociodemographic correlates. *Social Psychiatry and Psychiatric Epidemiology, 41*(8), 674–678. http://dx.doi.org/10.1007/s00127-006-0068-9

Afifi, T. O., Enns, M. W., Cox, B. J., de Graaf, R., ten Have, M., & Sareen, J. (2007). Child abuse and health-related quality of life in adulthood. *Journal of Nervous and Mental Disease, 195*(10), 797–804. http://dx.doi.org/10.1097/NMD.0b013e3181567fdd

Ahmed, W., Minnaert, A., van der Werf, G., & Kuyper, H. (2010). Perceived social support and early adolescents' achievement: The mediational roles of motivational beliefs and emotions. *Journal of Youth and Adolescence, 39*(1), 36–46. http://dx.doi.org/10.1007/s10964-008-9367-7

Al-Fayez, G. A., Ohaeri, J. U., & Gado, O. M. (2012). Prevalence of physical, psychological, and sexual abuse among a nationwide sample of Arab high school students: Association with family characteristics, anxiety, depression, self-esteem,

and quality of life. *Social Psychiatry and Psychiatric Epidemiology, 47*(1), 53–66. http://dx.doi.org/10.1007/s00127-010-0311-2

Aldwin, C. M., & Park, C. L. (2004). Coping and physical health outcomes: An overview. *Psychology & Health, 19*(3), 277–281.

Ali, S., Amat, S., Mahmud, M. I., Abidin, M. H. Z., Subhan, M., & Bakar, A. Y. A. (2018). Resilience and sense of belonging among medical students in a Malaysian public university. *International Journal of Engineering and Technology (UAE), 7*(2), 70–73.

Alimoradi, M., Asadi, H., Asadbeigy, H., & Asadniya, R. (2014). The study of links between social support and psychological problems among youth. *International Journal of Basic Sciences & Applied Research, 3*, 270–274.

Alloy, L. B., Abramson, L. Y., Smith, J. M., Gibb, B. E., & Neeren, A. M. (2006). Role of parenting and maltreatment histories in unipolar and bipolar mood disorders: Mediation by cognitive vulnerability to depression. *Clinical Child and Fam Psychology Review, 9*(1), 23–64. http://dx.doi.org/10.1007/s10567-006-0002-4

American Psychiatric Association. (2015). Structured clinical interview for DSM-5 (SCID-5).

American Psychiatric Association. (2016). *History of the DSM*.: Author

Anders, S. L., Frazier, P. A., & Shallcross, S. L. (2012). Prevalence and effects of life event exposure among undergraduate and community college students. *Journal of Counseling Psychology, 59*(3), 449–457. http://dx.doi.org/10.1037/a0027753

Andrews, B., & Wilding, J. M. (2004). The relation of depression and anxiety to life-stress and achievement in students. *British Journal of Psychology, 95*(Pt 4), 509–521. http://dx.doi.org/10.1348/0007126042369802

Arambewela, R., & Hall, J. (2009). An empirical model of international student satisfaction. *Asia Pacific Journal of Marketing and Logistics, 21*(4), 555–569.

Archer, J., Cantwell, R., & Bourke, S. (1999). Coping at university: An examination of achievement, motivation, self-regulation, confidence, and method of entry. *Higher Education Research & Development, 18*(1), 31–54.

Artistico, D., Cervone, D., & Pezzuti, L. (2003). Perceived self-efficacy and everyday problem solving among young and older adults. *Psychology and Aging, 18*(1), 68.

Asante, K. O., & Andoh-Arthur, J. (2015). Prevalence and determinants of depressive symptoms among university students in Ghana. *Journal of Affective Disorders, 171*, 161–166. http://dx.doi.org/10.1016/j.jad.2014.09.025

Astin, A. W. (1993). *What matters in college: Four critical years revisited*. San Francisco, CA: .

Atindanbila, S., & Abasimi, E. (2011). Depression and coping strategies among students in the University of Ghana. *Journal of Medicine and Medical Sciences, 2*(12), 1257–1266.

Awang, M. M., Kutty, F. M., & Ahmad, A. R. (2014). Perceived social support and well being: First-year student experience in university. *International Education Studies, 7*(13). http://dx.doi.org/10.5539/ies.v7n13p261

Barger, S. D., Messerli-Bürgy, N., & Barth, J. (2014). Social relationship correlates of major depressive disorder and depressive symptoms in Switzerland: Nationally representative cross sectional study. *BMC Public Health, 14*(1), 273. http://dx.doi.org/10.1186/1471-2458-14-273

Barth, J., Hofmann, K., & Schori, D. (2014). Depression in early adulthood: Prevalence and psychosocial correlates among young Swiss men. *Swiss Medical Weekly, 144*, w13945. http://dx.doi.org/10.4414/smw.2014.13945

Bastaminia, A., Bani Hashemi, F., Alizadeh, M., & Dastoorpoor, M. (2016). *Resilience and mental health: A study among students at the State University of Yasuj City*: *Vol. 18*.

Battle, C. L., Shea, M. T., Johnson, D. M., Yen, S., Zlotnick, C., Zanarini, M. C., . . . Morey, L. C. (2004). Childhood maltreatment associated with adult personality disorders: Findings from the Collaborative Longitudinal Personality Disorders Study. *Journal of Personality Disorders, 18*(2), 193–211.

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*(3), 497.

Bayram, N., & Bilgel, N. (2008). The prevalence and socio-demographic correlations of depression, anxiety and stress among a group of university students. *Social Psychiatry and Psychiatric Epidemiology, 43*(8), 667–672. http://dx.doi.org/10.1007/s00127-008-0345-x

Bebbington, P. E., Hurry, J., & Tennant, C. (1988). Adversity and the symptoms of depression. *International Journal of Social Psychiatry, 34*(3), 163–171. http://dx.doi.org/10.1177/002076408803400301

Beck, A. T. (1987). Cognitive models of depression. *Journal of Cognitive Psychotherapy,*.

Beiter, R., Nash, R., McCrady, M., Rhoades, D., Linscomb, M., Clarahan, M., & Sammut, S. (2015). The prevalence and correlates of depression, anxiety, and stress in a sample of college students. *Journal of Affective Disorders, 173*, 90–96. http://dx.doi.org/10.1016/j.jad.2014.10.054

Bellis, M. A., Hughes, K., Leckenby, N., Hardcastle, K. A., Perkins, C., & Lowey, H. (2015). Measuring mortality and the burden of adult disease associated with

adverse childhood experiences in England: A national survey. *Journal of Public Health (Oxf), 37*(3), 445–454. http://dx.doi.org/10.1093/pubmed/fdu065

Bellis, M. A., Hughes, K., Leckenby, N., Perkins, C., & Lowey, H. (2014). National household survey of adverse childhood experiences and their relationship with resilience to health-harming behaviors in England. *BMC Medicine, 12*, 72. http://dx.doi.org/10.1186/1741-7015-12-72

Benjet, C. (2010). Childhood adversities of populations living in low-income countries: Prevalence, characteristics, and mental health consequences. *Current Opinion in Psychiatry, 23*(4), 356–362.

Berenbaum, H., Valera, E. M., & Kerns, J. G. (2003). Psychological trauma and schizotypal symptoms. *Schizophrenia Bulletin, 29*(1), 143–152.

Bernardon, S., Babb, K. A., Hakim-Larson, J., & Gragg, M. (2011). Loneliness, attachment, and the perception and use of social support in university students. *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement, 43*(1), 40.

Bersani, G., Moscariello, M. A., Bersani, F. S., Colletti, C., Anastasia, A., Prinzivalli, E., . . . Salviati, M. (2014). Dissociative symptoms in female patients with mood and anxiety disorders: A psychopathological and temperamental investigation. *European Review for Medical and Pharmacological Sciences, 18*(21), 3217–3222.

Bifulco, A., Bernazzani, O., Moran, P. M., & Jacobs, C. (2005). The childhood experience of care and abuse questionnaire (CECA.Q): Validation in a community series. *British Journal of Clinical Psychology, 44*(Pt 4), 563–581. http://dx.doi.org/10.1348/014466505x35344

Bifulco, A., Brown, G. W., Moran, P., Ball, C., & Campbell, C. (1998). Predicting depression in women: The role of past and present vulnerability. *Psychological Medicine, 28*(1), 39–50.

Bifulco, A., Moran, P. M., Baines, R., Bunn, A., & Stanford, K. (2002). Exploring psychological abuse in childhood: II. Association with other abuse and adult clinical depression. *Bulletin of the Menninger Clinic, 66*(3), 241–258.

Bostwick, W. B., Boyd, C. J., Hughes, T. L., & McCabe, S. E. (2010). Dimensions of sexual orientation and the prevalence of mood and anxiety disorders in the United States. *American Journal of Public Health, 100*(3), 468–475. doi:10.2105/ajph.2008.152942

Borofsky, L. A., Kellerman, I., Baucom, B., Oliver, P. H., & Margolin, G. (2013). Community violence exposure and adolescents' school engagement and academic achievement over time. *Psychology of Violence, 3*(4), 381–395. http://dx.doi.org/10.1037/a0034121

Bowlby, J. (1983). *Attachment: Attachment and loss: Vol. 1*.: Basic Books.

Briere, J. N. (1992). *Child abuse trauma: Theory and treatment of the lasting effects*: Vol. 2.: Sage.

Brown, P. (2016). *The invisible problem? Improving students' mental health*. Higher Education Policy Institute, Retrieved from

Brugha, Bebbington, P., Tennant, C., & Hurry, J. (1985). The List of Threatening Experiences: A subset of 12 life event categories with considerable long-term contextual threat. *Psychological Medicine, 15*(1), 189–194.

Brugha, & Cragg, D. (1990). The List of Threatening Experiences: The reliability and validity of a brief life events questionnaire. *Acta Psychiatrica Scandinaiva, 82*(1), 77–81.

Brummett, B. H., Mark, D. B., Siegler, I. C., Williams, R. B., Babyak, M. A., Clapp-Channing, N. E., & Barefoot, J. C. (2005). Perceived social support as a predictor of mortality in coronary patients: Effects of smoking, sedentary behavior, and depressive symptoms. *Psychosomatic Medicine, 67*(1), 40–45. http://dx.doi.org/10.1097/01.psy.0000149257.74854.b7

Brunner, R., Parzer, P., Sculd, V., & Resch, F. (2000). Dissociative symptomotology and trumatogenic factors in adolescent's psychiatric patients. *Journal of Nervous Mental Disorders, 188*(2), 71–77.

Bukhari, S. R., & Afzal, F. (2017). Perceived social support predicts psychological problems among university students. *The International Journal of Indian Psychology, 4*(2), 2349–3429.

Byrd, D. R., & McKinney, K. J. (2012). Individual, interpersonal, and institutional level factors associated with the mental health of college students. *Journal of American College Health, 60*(3), 185–193. http://dx.doi.org/10.1080/07448481.2011.584334

Camara, M., Bacigalupe, G., & Padilla, P. (2017). The role of social support in adolescents: Are you helping me or stressing me out? *International Journal of Adolescence and Youth, 22*(2), 123–136. http://dx.doi.org/10.1080/02673843.2013.875480

Campbell-Sills, L., Cohan, S. L., & Stein, M. B. (2006). Relationship of resilience to personality, coping, and psychiatric symptoms in young adults. *Behaviour Research and Therapy, 44*(4), 585–599. http://dx.doi.org/10.1016/j.brat.2005.05.001

Campbell, J. A., Walker, R. J., & Egede, L. E. (2016). Associations between adverse childhood experiences, high-risk behaviors, and morbidity in adulthood. *American*

Journal of Preventative Medicine, 50(3), 344–352. http://dx.doi.org/10.1016/j.amepre.2015.07.022

Canty-Mitchell, J., & Zimet, G. D. (2000). Psychometric properties of the Multidimensional Scale of Perceived Social Support in urban adolescents. *American Journal of Community Psychology, 28*(3), 391–400. http://dx.doi.org/10.1023/A:1005109522457

Carlson, E. A., Yates, T. M., & Sroufe, L. A. (2009). Development of dissociation and development of the self. In (Eds.), *Dissociation and the dissociative disorders.* New York, NY: Routledge.

Carlson, E. B., Putnam, F. W., Ross, C. A., Torem, M., Coons, P., Dill, D. L., . . . Braun, B. G. (1993). Validity of the Dissociative Experiences Scale in screening for multiple personality disorder: A multicenter study. *American Journal of Psychiatry, 150*(7), 1030–1036. http://dx.doi.org/10.1176/ajp.150.7.1030

Carr, S., & Francis, A. (2009). Childhood maltreatment and adult personality disorder symptoms in a non-clinical sample.*44*.

Carr, V., Lewin, Barnard, R., Walton, J., Allen, J., Constable, P., & Chapman, J. (2002). Comparisons between schizophrenia patients recruited from Australian general practices and public mental health services. *Acta Psychiatrica Scandinavica*, *105*, 346–355.

Carrion, V. G., & Steiner, H. (2000). Trauma and dissociation in delinquent adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry, 39*(3), 353–359.

Catalano, R. F., Hawkins, J. D., Berglund, M. L., Pollard, J. A., & Arthur, M. W. (2002). Prevention science and positive youth development: Competitive or cooperative frameworks? *Journal of Adolescent Health, 31*(6), 230–239.

Cefai, C. (2008). *Promoting resilience in the classroom: A guide to developing pupils' emotional and cognitive skills*. London, England: Kingsley.

Chan, K. L. (2013). Victimization and poly-victimization among school-aged Chinese adolescents: Prevalence and associations with health. *Preventative Medicine, 56*(3–4), 207–210. http://dx.doi.org/10.1016/j.ypmed.2012.12.018

Chapman, D. P., Whitfield, C. L., Felitti, V. J., Dube, S. R., Edwards, V. J., & Anda, R. F. (2004). Adverse childhood experiences and the risk of depressive disorders in adulthood. *Journal of Affective Disorders, 82*(2), 217–225. http://dx.doi.org/10.1016/j.jad.2003.12.013

Charles, C., & Mertler, C. (2002). *Educational research.* Boston, MA: Allyn and Bacon.

Chartier, M. J., Walker, J. R., & Naimark, B. (2010). Separate and cumulative effects of adverse childhood experiences in predicting adult health and health care utilization. *Child Abuse Neglect, 34*(6), 454–464. http://dx.doi.org/10.1016/j.chiabu.2009.09.020

Chemers, M. M., Hu, L. T., & Garcia, B. F. (2001). Academic self-efficacy and first year college student performance and adjustment. *Journal of Educational Psychology, 93*(1), 55–64.

Chen, L., Wang, L., Qiu, X. H., Yang, X. X., Qiao, Z. X., Yang, Y. J., & Liang, Y. (2013). Depression among Chinese university students: Prevalence and socio-demographic correlates. *PLOS ONE, 8*(3). http://dx.doi.org/10.1371/journal.pone.0058379

Chow, K. M., Tang, W. K. F., Chan, W. H. C., Sit, W. H. J., Choi, K. C., & Chan, S. (2018). Resilience and well-being of university nursing students in Hong Kong: A cross-sectional study. *BMC Medical Education, 18*(1), 13. http://dx.doi.org/10.1186/s12909-018-1119-0

Christopher, T. (2002). Life events, stress and depression: A review of recent findings. *Australian and New Zealand Journal of Psychiatry, 36,* 173–182.

Chu, J. A., & Dill, D. L. (1990). Dissociative symptoms in relation to childhood physical and sexual abuse. *American Journal of Psychiatry, 147*(7), 887–892. http://dx.doi.org/10.1176/ajp.147.7.887

Chu, P. S., Saucier, D. A., & Hafner, E. (2010). Meta-analysis of the relationships between social support and well-being in children and adolescents. *Journal of Social and Clinical Psychology*, *29*(6), 624–645.

Clifton, C. A., Daniel, F. S., Jeffery, K., Madhu, S., Patricia, D., Gregory, W., . . . Herman, T. (2007). Psychometric evaluation of a Coping Strategies Inventory Short-Form (CSI-SF) in the Jackson Heart Study Cohort. *International Journal of Environmental Research and Public Health, 4*(4), 289–295.

Cochran, S. D., Mays, V. M., & Sullivan, J. G. (2003). Prevalence of mental disorders, psychological distress, and mental health services use among lesbian, gay, and bisexual adults in the United States. *J Consult Clin Psychol*, *71*(1), 53–61. doi:10.1037//0022-006x.71.1.53

Cohen, S. (2004). Social relationships and health. *American Psychology, 59*(8), 676–684. http://dx.doi.org/10.1037/0003-066X.59.8.676

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98*(2), 310–357.

Colman, I., Zeng, Y., McMartin, S. E., Naicker, K., Ataullahjan, A., Weeks, M., . . . Galambos, N. L. (2014). Protective factors against depression during the transition from adolescence to adulthood: Findings from a national Canadian cohort. *Preventative Medicine, 65*, 28–32. http://dx.doi.org/10.1016/j.ypmed.2014.04.008

Coohey, C., Renner, L. M., Hua, L., Zhang, Y. J., & Whitney, S. D. (2011). Academic achievement despite child maltreatment: A longitudinal study. *Child Abuse & Neglect, 35*(9), 688–699. http://dx.doi.org/10.1016/j.chiabu.2011.05.009

Coons, P. M., Bowman, E. S., Kluft, R. P., & Milstein, V. (1991). The cross-cultural occurrence of MPD: Additional cases from a recent survey. *Dissociation: Progress in the Dissociative Disorders, 4*(3), 124–128.

Coons, P. M., Bowman, E. S., & Milstein, V. (1988). Multiple personality disorder. A clinical investigation of 50 cases. *Journal of Nervous and Mental Dis, 176*(9), 519–527.

Cornwell, E. Y., & Waite, L. J. (2009). Social disconnectedness, perceived isolation, and health among older adults. *Journal of Health and Social Behavior, 50*(1), 31–48.

Corso, P. S., Edwards, V. J., Fang, X., & Mercy, J. A. (2008). Health-related quality of life among adults who experienced maltreatment during childhood. *American Journal of Public Health, 98*(6), 1094–1100. http://dx.doi.org/10.2105/AJPH.2007.119826

Cutajar, M. C., Mullen, P. E., Ogloff, J. R., Thomas, S. D., Wells, D. L., & Spataro, J. (2010). Psychopathology in a large cohort of sexually abused children followed up to 43 years. *Child Abuse & Neglect, 34*(11), 813–822.

Dafaalla, M., Farah, A., Bashir, S., Khalil, A., Abdulhamid, R., Mokhtar, M., . . . Abdalrahman, I. (2016). Depression, anxiety, and stress in Sudanese medical students: A cross-sectional study on role of quality of life and social support. *American Journal of Educational Research, 4*(13). http://pubs.sciepub.com/education/4/13/4

Dalenberg, C. J., Brand, B. L., Gleaves, D. H., Dorahy, M. J., Loewenstein, R. J., Cardena, E., . . . Spiegel, D. (2012). Evaluation of the evidence for the trauma and fantasy

models of dissociation. *Psychological Bulletin, 138*(3), 550–588. http://dx.doi.org/10.1037/a0027447

Dalenberg, C. J., & Palesh, O. G. (2004). Relationship between child abuse history, trauma, and dissociation in Russian college students. *Child Abuse & Neglect, 28*(4), 461–474. http://dx.doi.org/10.1016/j.chiabu.2003.11.020

Dawson, M. (2013). Resilience: The role of optimism, perceived parental autonomy support and perceived social support in first year university students. *Journal of Education and Training Studies, 1*(2).

Day, L., Hanson, K., Maltby, J., Proctor, C., & Wood, A. (2010). Hope uniquely predicts objective academic achievement above intelligence, personality, and previous academic achievement. *Journal of Research in Personality, 44*(4), 550–553.

de la Fuente, J., Fernández-Cabezas, M., Cambil, M., Vera, M. M., González-Torres, M. C., & Artuch-Garde, R. (2017). Linear relationship between resilience, learning approaches, and coping strategies to predict achievement in undergraduate students. *Frontiers in Psychology, 8*, 1039.

Dell, P. F., & Eisenhower, J. W. (1990). Adolescent multiple personality disorder: A preliminary study of eleven cases. *Journal of the American Academy of Child & Adolescent Psychiatry, 29*(3), 359–366. http://dx.doi.org/10.1097/00004583-199005000-00005

Department of Education. (2016). *Participation rates in higher education: Academic years 2006/2007 – 2014/2015 (provisional)*. Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/552886/HEIPR_PUBLICATION_2014-15.pdf

de Boer, A., Pijl, S. J., Post, W., & Minnaert, A. (2013). Peer acceptance and friendships of students with disabilities in general education: The role of child, peer, and

classroom variables. *Social Development, 22*(4), 831–844. doi:10.1111/j.1467-9507.2012.00670.x

DeRosier, M., Frank, E., Schwartz, V., & Leary, K. (2013). The potential role of resilience education for preventing mental health problems for college students. *Psychiatric Annals,, 43*, 538–544. http://dx.doi.org/10.3928/00485713-20131206-05

Dienes, K. A., Hammen, C., Henry, R. M., Cohen, A. N., & Daley, S. E. (2006). The stress sensitization hypothesis: Understanding the course of bipolar disorder. *Journal of Affective Disorders, 95*(1-3), 43–49.

Dollete, S., & Phillips, M. (2004). Understanding girls' circle as an intervention on perceived social support, body image, self-efficacy, locus of control and self-esteem. *The Journal of Psychology, 90*(2), 204–215.

Du, H., & King, R. B. (2013). Placing hope in self and others: Exploring the relationships among self-construals, locus of hope, and adjustment. *Personality and Individual Differences, 54*(3), 332–337. http://dx.doi.org/10.1016/j.paid.2012.09.015

Du, H., King, R. B., & Chu, S. K. (2016). Hope, social support, and depression among Hong Kong youth: Personal and relational self-esteem as mediators. *Psychology, Health & Medicine, 21*(8), 926–931.

Dube, S. R., Anda, R. F., Whitfield, C. L., Brown, D. W., Felitti, V. J., Dong, M., & Giles, W. H. (2005). Long-term consequences of childhood sexual abuse by gender of victim. *American Journal of Preventative Medicine, 28*(5), 430–438. http://dx.doi.org/10.1016/j.amepre.2005.01.015

Dumont, M. (1999). Resilience in adolescents: Protective role of social support, coping strategies, self-esteem, and social activities on experience of stress and depression. *Journal of Youth and Adolescence, 28*(3), 343. http://dx.doi.org/10.1023/A:1021637011732

Duncan, H., & Dick, T. (2000). Collaborative workshops and student academic performance in introductory college mathematics courses: A study of a Treisman model math excel program. *School Science and Mathematics, 100*(7), 365–373.

Dusselier, L., Dunn, B., Wang, Y., Shelley, M. C., 2nd, & Whalen, D. F. (2005). Personal, health, academic, and environmental predictors of stress for residence hall students. *Journal of American College Health, 54*(1), 15–24. http://dx.doi.org/10.3200/JACH.54.1.15-24

Dwyer, A. L., & Cummings, A. L. (2001). Stress, self-efficacy, social support, and coping strategies in university students. *Canadian Journal of Counseling, 35*(3), 208–220.

Eberhart, N. K., & Hammen, C. L. (2010). Interpersonal style, stress, and depression: an examination of transactional and diathesis-stress models. *Journal of Social and Clinical Psychology, 29*(1), 23–38. http://dx.doi.org/10.1521/jscp.2010.29.1.23

Edwards, O. W., Mumford, V. E., Shillingford, M. A., & Serra-Roldan, R. (2007). Developmental assets: A prevention framework for students considered at risk. *Children & Schools, 29*(3), 145–153.

Ellonen, N., Kääriäinen, J., & Autio, V. (2008). Adolescent depression and school social support: A multilevel analysis of a Finnish sample, *36*.

Espinoza, G., Gonzales, N. A., & Fuligni, A. J. (2013). Daily school peer victimization experiences among Mexican-American adolescents: Associations with psychosocial, physical and school adjustment. *Journal of Youth and Adolescence, 42*(12), 1775–1788. http://dx.doi.org/10.1007/s10964-012-9874-4

Fass, M. (2002). The influence of parental and peer attachment on college students' academic achievement. *Psychology in the Schools, 39*(5), 516. http://dx.doi.org/10.1002/pits.10050

Farmer, T. W., Leung, M.-C., Weiss, M. P., Irvin, M. J., Meece, J. L., & Hutchins, B. C. (2011). Social network placement of rural secondary students with disabilities: Affiliation and centrality. *Exceptional Children, 78*(1), 24–38. doi:10.1177/001440291107800102

Feldman, D. B., & Kubota, M. (2015). Hope, self-efficacy, optimism, and academic achievement: Distinguishing constructs and levels of specificity in predicting college grade-point average. *Learning and Individual Differences, 37*, 210–216. http://dx.doi.org/10.1016/j.lindif.2014.11.022

Fergusson, D. M., Boden, J. M., & Horwood, L. J. (2008). Exposure to childhood sexual and physical abuse and adjustment in early adulthood. *Child Abuse & Neglect, 32*(6), 607–619. http://dx.doi.org/10.1016/j.chiabu.2006.12.018

Fergusson, D. M., Horwood, L. J., & Beautrais, A. L. (1999). Is sexual orientation related to mental health problems and suicidality in young people? Arch Gen Psychiatry, 56(10), 876–880. doi:10.1001/archpsyc.56.10.876

Fergusson, D. M., McLeod, G. F., & Horwood, L. J. (2013). Childhood sexual abuse and adult developmental outcomes: Findings from a 30-year longitudinal study in New Zealand. *Child Abuse & Neglect, 37*(9), 664–674.

Firth, J. (1986). Levels and sources of stress in medical students. *British Medical Journal (Clinical Research Education), 292*(6529), 1177–1180.

Flisher, A. J., Kramer, R. A., Hoven, C. W., Greenwald, S., Alegria, M., Bird, H. R., . . . Moore, R. E. (1997). Psychosocial characteristics of physically abused children and adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry, 36*(1), 123–131. http://dx.doi.org/10.1097/00004583-199701000-00026

Fleming, A. R., Edwin, M., Hayes, J. A., Locke, B. D., & Lockard, A. J. (2018). Treatment-seeking college students with disabilities: Presenting concerns,

protective factors, and academic distress. Rehabilitation Psychology, 63(1), 55–67. doi:10.1037/rep0000193

Folkman, S., & Moskowitz, J. T. (2004). Coping: Pitfalls and promise. *Annual Review of Psychology, 55*, 745–774.

Foote, B., Smolin, Y., Kaplan, M., Legatt, M. E., & Lipschitz, D. (2006). Prevalence of dissociative disorders in psychiatric outpatients. *American Journal of Psychiatry, 163*(4), 623–629. http://dx.doi.org/10.1176/ajp.2006.163.4.623

Franken, R. (1994). *Human motivation*. Pacific Grove, CA: Brooks.

Friedlander, L. J., Reid, G. J., Shupak, N., & Cribbie, R. (2007). Social support, self-esteem, and stress as predictors of adjustment to university among first-year undergraduates. *Journal of College Student Development, 48*(3), 259–274. http://dx.doi.org/10.1353/csd.2007.0024

Galatzer-Levy, I. R., Burton, C. L., & Bonanno, G. A. (2012). Coping flexibility, potentially traumatic life events, and resilience: A prospective study of college student adjustment. *Journal of Social and Clinical Psychology, 31*(6), 542–567.

Gallagher, M. W., Marques, S. C., & Lopez, S. J. (2017). Hope and the academic trajectory of college students. *Journal of Happiness Studies, 18*(2), 341–352.

Gallo, E. A. G., De Mola, C. L., Wehrmeister, F., Gonçalves, H., Kieling, C., & Murray, J. (2017). Childhood maltreatment preceding depressive disorder at age 18 years: A prospective Brazilian birth cohort study. *Journal of Affective Disorders, 217*, 218–224. http://dx.doi.org/10.1016/j.jad.2017.03.065

Gansemer-Topf, A. M., & Schuh, J. H. (2003). Instruction and academic support expenditures: An investment in retention and graduation. *Journal of College Student Retention: Research, Theory & Practice, 5*(2), 135–145.

García-Moya, I., Bunn, F., Jiménez-Iglesias, A., Paniagua, C., & Brooks, F. M. (2018). The conceptualisation of school and teacher connectedness in adolescent research: A scoping review of literature. *Educational Review*, 1–22.

Gariepy, G., Honkaniemi, H., & Quesnel-Vallee, A. (2016). Social support and protection from depression: Systematic review of current findings in Western countries. *British Journal of Psychiatry, 209*(4), 284–293. http://dx.doi.org/10.1192/bjp.bp.115.169094

Garlow, S. J., Rosenberg, J., Moore, J. D., Haas, A. P., Koestner, B., Hendin, H., & Nemeroff, C. B. (2008). Depression, desperation, and suicidal ideation in college students: Results from the American Foundation for Suicide Prevention College Screening Project at Emory University. *Depression and Anxiety, 25*(6), 482–488. http://dx.doi.org/10.1002/da.20321

Gary Peterson, M. D. (1991, April). *Children coping with trauma: Diagnosis of "Dissociation Identity Disorder."* Paper presented at the 37th annual meeting of the American Academy of Child and Adolescent Psychiatry, Retrieved from https://scholarsbank.uoregon.edu/xmlui/bitstream/handle/1794/1453/Diss_4_3_7_OCR_rev.pdf?sequence=4

Gaudreau, P., Nicholls, A., & Levy, A. R. (2010). The ups and downs of coping and sport achievement: An episodic process analysis of within-person associations. *Journal of Sport Exercise Psychology, 32*(3), 298–311.

Ghasemi, A., & Ariapooran, S. (2011). The relationship between social support and mental health and resiliency of cultural homogeneity. *Journal of Social Sciences, 5*(1), 302–327.

Gibb, B. E., Alloy, L. B., Abramson, L. Y., Rose, D. T., Whitehouse, W. G., Donovan, P., . . . Tierney, S. (2001). History of childhood maltreatment, negative cognitive styles,

and episodes of depression in adulthood. *Cognitive Therapy and Research, 25*(4), 425–446.

Gibb, B. E., Butler, A. C., & Beck, J. S. (2003). Childhood abuse, depression, and anxiety in adult psychiatric outpatients. *Depression and Anxiety, 17*(4), 226–228.

Glozah, F. N. (2013). Effects of academic stress and perceived social support on the psychological wellbeing of adolescents in Ghana. *Open Journal of Medical Psychology, 2*, 143–150. http://dx.doi.org/10.4236/ojmp.2013.24022

Goebert, D., Thompson, D., Takeshita, J., Beach, C., Bryson, P., Ephgrave, K., . . . Tate, J. (2009). Depressive symptoms in medical students and residents: A multischool study. *Academic Medicine, 84*(2), 236–241.

H, E.-G., M, H., R, E.-D., & Ibrahim, A. (2005). Epidemiological aspects of depression among Assiut University students. *Al-Azhar Assiut Medical Journal, 29*, 147–158.

Haas, A., Koestner, B., Rosenberg, J., Moore, D., Garlow, S. J., Sedway, J., . . . Nemeroff, C. B. (2008). An interactive web-based method of outreach to college students at risk for suicide. *Journal of the American College Health, 57*(1), 15-22. http://dx.doi.org/10.3200/jach.57.1.15–22

Hall-Lande, J. A., Eisenberg, M. E., Christenson, S. L., & Neumark-Sztainer, D. (2007). Social isolation, psychological health, and protective factors in adolescence. *Adolescence, 42*(166), 265–287.

Hamdan-Mansour, A., & Hamdan-Mansour, A. H. M. (2015). Correlates of resilience among university students. *European Psychiatry, 30*(Supplement 1), 1945. http://dx.doi.org/10.1016/S0924-9338(15)31485-1

Hamdan-Mansour, A. M., & Dawani, H. A. (2008). Social support and stress among university students in Jordan. *International Journal of Mental Health and Addiction, 6*(3), 442–450. http://dx.doi.org/10.1007/s11469-007-9112-6

Hammen, C. (2005). Stress and depression. *Annual Review of Clinical Psychology, 1*, 293–319. http://dx.doi.org/10.1146/annurev.clinpsy.1.102803.143938

Harkness, K. L., Bruce, A. E., & Lumley, M. N. (2006). The role of childhood abuse and neglect in the sensitization to stressful life events in adolescent depression. *Journal of Abnormal Psychology, 115*(4), 730.

Harrison, D., Ziglio, E., Levin, L., & Morgan, A. (2004). Assets for health and development: Developing a conceptual framework. *European Office for Investment in Health and Development, London*, 9.

Hart, O. v. d., Nijenhuis, E. R. S., & Steele, K. (2005). Dissociation: An Insufficiently Recognized Major Feature of Complex PTSD. *Journal of traumatic stress, 18*(5). doi:http://www.onnovdhart.nl/articles/jts_complex_%20ptsd.pdf

Hartley, M. T. (2012). Assessing and Promoting Resilience: An Additional Tool to Address the Increasing Number of College Students With Psychological Problems. *Journal of College Counseling, 15*(1), 37-51. doi:10.1002/j.2161-1882.2012.00004.x

Hefner, J., & Eisenberg, D. (2009). Social support and mental health among college students. *Am J Orthopsychiatry, 79*(4), 491-499. doi:10.1037/a0016918

Herman-Stahl, M., & Petersen, A. C. (1996). The protective role of coping and social resources for depressive symptoms among young adolescents. *Journal of Youth and Adolescence, 25*(6), 733-753. doi:10.1007/BF01537451

Herman, J. L. (1992). Complex PTSD: A syndrome in survivors of prolonged and repeated trauma. *Journal of traumatic stress, 5*(3), 377-391.

Herman, M. D. J. L. (1999). Betrayal Trauma: The Logic of Forgetting Childhood Abuse. *American Journal of Psychiatry, 156*(5), 794-795. doi:10.1176/ajp.156.5.794

Hill, N. E., & Craft, S. A. (2003). Parent-school involvement and school performance: Mediated pathways among socioeconomically comparable African American and Euro-American families. *Journal of educational psychology, 95*(1), 74.

Hopkins, W. G. (2000). Quantitative Research Design. *Sportscience, 4*(1).

Hosseini, S. S. (2009). Examine the relationship between social support and resiliency. *Psychological Health, 21*(8), 45-67. .

Hovdestad, W., Campeau, A., Potter, D., & Tonmyr, L. (2015). A Systematic Review of Childhood Maltreatment Assessments in Population-Representative Surveys Since 1990. *PLOS ONE, 10*(5), e0123366. doi:10.1371/journal.pone.0123366

Hovens, J. G., Giltay, E. J., Wiersma, J. E., Spinhoven, P., Penninx, B. W., & Zitman, F. G. (2012). Impact of childhood life events and trauma on the course of depressive and anxiety disorders. *Acta Psychiatr Scand, 126*(3), 198-207. doi:10.1111/j.1600-0447.2011.01828.x

Howell, E. F., & Itzkowitz, S. (2016). *The dissociative mind in psychoanalysis : understanding and working with trauma*. Abingdon, Oxon ; New York, NY: Routledge.

Ibrahim, A. K., Kelly, S. J., Adams, C. E., & Glazebrook, C. (2013). A systematic review of studies of depression prevalence in university students. *J Psychiatr Res, 47*(3), 391-400. doi:10.1016/j.jpsychires.2012.11.015

Infurna, M. R., Reichl, C., Parzer, P., Schimmenti, A., Bifulco, A., & Kaess, M. (2016). Associations between depression and specific childhood experiences of abuse and neglect: a meta-analysis. *Journal of affective disorders, 190*, 47-55.

Ingram, R., & Luxton, D. (2005). Development of Psychopathology: A Vulnerability-Stress Perspective. In B. L. Hankin & J. R. Abela (Eds.). Thousand Oaks

Thousand Oaks, California: SAGE Publications, Inc. Retrieved from http://sk.sagepub.com/books/development-of-psychopathology. doi:10.4135/9781452231655

Innes, S. (2017). The relationship between levels of resilience and coping styles in chiropractic students and perceived levels of stress and well-being. *J Chiropr Educ., 31*(1), 1-7. doi:doi: 10.7899/JCE-16-2.

Innes, S. I. (2017). The relationship between levels of resilience and coping styles in chiropractic students and perceived levels of stress and well-being. *Journal of Chiropractic Education, 31*(1), 1-7.

Jernbro, C., Tindberg, Y., Lucas, S., & Janson, S. (2015). Quality of life among Swedish school children who experienced multitype child maltreatment. *Acta Paediatr, 104*(3), 320-325. doi:10.1111/apa.12873

Jud, A., Landolt, M. A., Tatalias, A., Lach, L. M., & Lips, U. (2013). Health-related quality of life in the aftermath of child maltreatment: follow-up study of a hospital sample. *Qual Life Res, 22*(6), 1361-1369. doi:10.1007/s11136-012-0262-z

Julal, F. (2013). Use of student support services among university students: Associations with problem-focused coping, experience of personal difficulty and psychological distress. *British Journal of Guidance & Counselling, 41*(4), 414-425.

Kadak, M. T., Nasiroglu, S., Boysan, M., & Aydin, A. (2013). Risk factors predicting posttraumatic stress reactions in adolescents after 2011 Van earthquake. *Compr Psychiatry, 54*(7), 982-990. doi:10.1016/j.comppsych.2013.04.003

Kaloeti, D. V. S., Rahmandani, A., Sakti, H., Salma, S., Suparno, S., & Hanafi, S. (2018). Effect of childhood adversity experiences, psychological distress, and resilience on depressive symptoms among Indonesian university students. *International Journal of Adolescence and Youth*, 1-8. doi:10.1080/02673843.2018.1485584

Kaltiala-Heino, R., Rimpela, M., Rantanen, P., & Laippala, P. (2001). Adolescent depression: the role of discontinuities in life course and social support. *J Affect Disord, 64*(2-3), 155-166.

Katon, W., Kleinman, A., & Rosen, G. (1982). Depression and somatization: a review. Part I. *Am J Med, 72*(1), 127-135.

Keele, R. (2012). *Quantitative Versus Qualitative Research, or Both?* : Jones & Bartlett Learning Publish.

Kendler, K. S., Kuhn, J. W., & Prescott, C. A. (2004). Childhood sexual abuse, stressful life events and risk for major depression in women. *Psychological Medicine, 34*(8), 1475-1482.

Kennerley, H. (1996). Cognitive therapy of dissociative symptoms associated with trauma. *Br J Clin Psychol, 35 (Pt 3)*, 325-340.

Kessler, McLaughlin, K. A., Green, J. G., Gruber, M. J., Sampson, N. A., Zaslavsky, A. M., . . . Williams, D. R. (2010). Childhood adversities and adult psychopathology in the WHO World Mental Health Surveys. *The British Journal of Psychiatry, 197*(5), 378-385. doi:10.1192/bjp.bp.110.080499

Kessler, R. C. (1997). The effects of stressful life events on depression. *Annu Rev Psychol, 48*, 191-214. doi:10.1146/annurev.psych.48.1.191

Kessler, R. C., McLaughlin, K. A., Green, J. G., Gruber, M. J., Sampson, N. A., Zaslavsky, A. M., . . . Williams, D. R. (2010). Childhood adversities and adult psychopathology in the WHO World Mental Health Surveys. *Br J Psychiatry, 197*(5), 378-385. doi:10.1192/bjp.bp.110.080499

Khatib, Y., Bhui, K., & Stansfeld, S. A. (2013). Does social support protect against depression & psychological distress? Findings from the RELACHS study of East

London adolescents. *J Adolesc, 36*(2), 393-402. doi:10.1016/j.adolescence.2013.01.001

Kirmani, M., Sharma, P., Anas, M., & Sanam, R. (2015). Hope, Resilience and Subjective Well-being among college going Adolescent Girls. 2349-6959.

Kirmani, M. N., Sharma, P., Anas, M., & Sanam, R. (2015). Hope, resilience and subjective well-being among college going adolescent girls. *International Journal of Humanities & Social Science Studies, 2*(1), 262-270.

Kitzrow, M. A. (2003). The mental health needs of today's college students: challenges and recommendations. *NASPA Journal, 41*(1).

Konishi, C., Hymel, S., Zumbo, B. D., & Zhen, L. (2010). Do School Bullying and Student—Teacher Relationships Matter for Academic Achievement? A Multilevel Analysis. *Canadian Journal of School Psychology, 25*(1), 19-39. doi:10.1177/0829573509357550

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9: validity of a brief depression severity measure. *J Gen Intern Med, 16*(9), 606-613.

Kulick, A., Wernick, L. J., Woodford, M. R., & Renn, K. (2017). Heterosexism, depression, and campus engagement among LGBTQ college students: Intersectional differences and opportunities for healing. *Journal of Homosexuality, 64*(8), 1125–1141. doi:10.1080/00918369.2016.1242333

Kugbey, N. (2015). The Influence of Social Support on the Levels of Depression, Anxiety and Stress among Students in Ghana. *Journal of Education and Practice, 6*(25).

Kume, G. D. (2006). *Posttraumatic Stress: New Research*: Nova Publishers.

L. Hobbs, D., & Coons, P. (1994). *Educational problems in patients with dissociative identity disorder* (Vol. 7).

Lakey, B., & Orehek, E. (2011). Relational regulation theory: A new approach to explain the link between perceived social support and mental health. *Psychological review, 118*(3), 482.

Lanier, P., Kohl, P. L., Raghavan, R., & Auslander, W. (2015). A preliminary examination of child well-being of physically abused and neglected children compared to a normative pediatric population. *Child Maltreat, 20*(1), 72-79. doi:10.1177/1077559514557517

Lardinois, M., Lataster, T., Mengelers, R., Van Os, J., & Myin-Germeys, I. (2011). Childhood trauma and increased stress sensitivity in psychosis. *Acta Psychiatr Scand, 123*(1), 28-35. doi:10.1111/j.1600-0447.2010.01594.x

Larsson, S., Andreassen, O. A., Aas, M., Røssberg, J. I., Mork, E., Steen, N. E., . . . Lorentzen, S. (2013). High prevalence of childhood trauma in patients with schizophrenia spectrum and affective disorder. *Compr Psychiatry, 54*(2), 123-127. doi:https://doi.org/10.1016/j.comppsych.2012.06.009

Lazarus, R., & Folkman, S. (1984). *Stress, appraisal, and coping.* . New York: : Springer.

Leary, K. A. D., M. E. (2012). Factors promoting positive adaptation and resilience during the transition to college. *Psychology & Health, 3*(12A), 1215-1222. doi:http://dx.doi.org/10.4236/psych.2012.312A180

Leary, M., & Baumeister, R. (2017). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. In *Interpersonal Development* (pp. 57-89): Routledge.

Lee, J. H., Seo, M., Lee, M., Park, S. Y., Lee, J. H., & Lee, S. M. (2017). Profiles of Coping Strategies in Resilient Adolescents. *Psychol Rep, 120*(1), 49-69. doi:10.1177/0033294116677947

Lee, R. M., & Robbins, S. B. (2000). Understanding social connectedness in college women and men. *Journal of Counseling & Development, 78*(4), 484-491.

Lemberger, M. E., & Clemens, E. V. (2012). Connectedness and self-regulation as constructs of the student success skills program in inner-city African American elementary school students. *Journal of Counseling & Development, 90*(4), 450-458.

Lemberger, M. E., Selig, J. P., Bowers, H., & Rogers, J. E. (2015). Effects of the student success skills program on executive functioning skills, feelings of connectedness, and academic achievement in a predominantly Hispanic, low-income middle school district. *Journal of Counseling & Development, 93*(1), 25-37.

Lenz, B. (2001). The transition from adolescence to young adulthood: a theoretical perspective. *J Sch Nurs, 17*(6), 300-306. doi:10.1177/10598405010170060401

Levin, R., & Spei, E. (2004). Relationship of purported measures of pathological and nonpathological dissociation to self-reported psychological distress and fantasy immersion. *Assessment, 11*(2), 160-168. doi:10.1177/1073191103256377

Lewin, Carr, V. J., & Webster, R. A. (1998). Recovery from post-earthquake psychological morbidity: who suffers and who recovers? *Aust N Z J Psychiatry, 32*(1), 15-20. doi:10.3109/00048679809062701

Li, Y., Zhang, D., Liang, Y., & Hu, T. (2016). Meta-analysis of the Relationship between Life Events and Depression in Adolescents. *Journal of Pediatric Care, 2*(1). doi:DOI: 10.21767/2471-805X.100008

Li, Z., Wang, Y., Mao, X., & Yin, X. (2018). Relationship between hope and depression in college students: A cross-lagged regression analysis. *Personality and mental health, 12*(2), 170-176.

Lindert, J., von Ehrenstein, O. S., Grashow, R., Gal, G., Braehler, E., & Weisskopf, M. G. (2014). Sexual and physical abuse in childhood is associated with depression and

anxiety over the life course: systematic review and meta-analysis. *International journal of public health, 59*(2), 359-372.

Liporace, M., Contini de González, N., Ongarato, P., Saavedra, E., & de la Iglesia, G. (2009). *Estrategias de afrontamiento frente a problemas académicos en estudiantes medios y universitarios* (Vol. 27).

Liu, S. R., Kia-Keating, M., & Modir, S. (2017). Hope and adjustment to college in the context of collective trauma. *Journal of American College Health, 65*(5), 323-330.

Lopez, S. J., Rose, S., Robinson, C., Marques, S. C., & PAIS, J. (2009). Measuring and promoting hope in schoolchildren. In *Handbook of positive psychology in schools* (pp. 55-68): Routledge.

M.D, P. D., L.C.S.W, J., M.D, J., Haas, A., B.S, B., Hendin, H., & Nemeroff, C. (2008). Depression, desperation, and suicidal ideation in college students: Results from the American Foundation for Suicide Prevention College Screening Project at Emory University. *Depression and Anxiety, 25*, 482-488. doi:10.1002/da.20321

Maaranen, P., Tanskanen, A., Haatainen, K., Honkalampi, K., Koivumaa-Honkanen, H., Hintikka, J., & Viinamaki, H. (2005). The relationship between psychological and somatoform dissociation in the general population. *J Nerv Ment Dis, 193*(10), 690-692.

Maaranen, P., Tanskanen, A., Honkalampi, K., Haatainen, K., Hintikka, J., & Viinamaki, H. (2005). Factors associated with pathological dissociation in the general population. *Aust N Z J Psychiatry, 39*(5), 387-394. doi:10.1080/j.1440-1614.2005.01586.x

Mackinnon, S. P. (2012). Perceived social support and academic achievement: Cross-lagged panel and bivariate growth curve analyses. *Journal of Youth and Adolescence, 41*(4), 474-485.

MacMillan, H. L., Fleming, J. E., Streiner, D. L., Lin, E., Boyle, M. H., Jamieson, E., . . . Beardslee, W. R. (2001). Childhood abuse and lifetime psychopathology in a community sample. *American Journal of Psychiatry, 158*(11), 1878-1883.

Mae Lynn, R.-R., Carmen, L. R.-M., Luis, C.-F., Alba, S.-T., & Guillermo, B. (2013). Depression symptoms and stressful life events among college students in Puerto Rico. *J Affect Disord, 145*(3), 324–330. . doi:doi:10.1016/j.jad.2012.08.010

Mahatme, S. S., Dhavale, H. S., & Patkar, A. P. (1989). Study of correlation of intensity of symptoms with stressful life events in depressed patients. *Indian J Psychiatry, 31*(4), 288-292.

Mall, S., Mortier, P., Taljaard, L., Roos, J., Stein, D. J., & Lochner, C. (2018). The relationship between childhood adversity, recent stressors, and depression in college students attending a South African university. *BMC Psychiatry, 18*(1), 63. doi:10.1186/s12888-017-1583-9

Martin Jr, W. E., Swartz-Kulstad, J. L., & Madson, M. (1999). Psychosocial factors that predict the college adjustment of first-year undergraduate students: Implications for college counselors. *Journal of College Counseling, 2*(2), 121-133.

Martinez-Taboas, A., & Bernal, G. (2000). Dissociation, psychopathology, and abusive experiences in a nonclinical Latino university student group. *Cultur Divers Ethnic Minor Psychol, 6*(1), 32-41.

Martinez, A. (1991). *Multiple personality in Puerto Rico: Analysis of fifteen cases* (Vol. 4).

Maughan, B., & McCarthy, G. (1997). Childhood adversities and psychosocial disorders. *British medical bulletin, 53*(1), 156-169.

Maughan, B., & Rutter, M. (1997). Retrospective reporting of childhood adversity: issues in assessing long-term recall. *J Pers Disord, 11*(1), 19-33.

McGavock, L., & Spratt, T. (2014). Prevalence of Adverse Childhood Experiences in a University Population: Associations with Use of Social Services. *The British Journal of Social Work, 44*(3), 657-674. doi:10.1093/bjsw/bcs127

McKenzie, L. E., Polur, R. N., Wesley, C., Allen, J. D., McKeown, R. E., & Zhang, J. (2013). Social contacts and depression in middle and advanced adulthood: findings from a US national survey, 2005-2008. *Int J Soc Psychiatry, 59*(7), 627-635. doi:10.1177/0020764012463302

McLaughlin, K. A., Greif Green, J., Gruber, M. J., Sampson, N. A., Zaslavsky, A. M., & Kessler, R. C. (2012). Childhood adversities and first onset of psychiatric disorders in a national sample of US adolescents. *Arch Gen Psychiatry, 69*(11), 1151-1160. doi:10.1001/archgenpsychiatry.2011.2277

McLaughlin, K. A., Sheridan, M. A., & Lambert, H. K. (2014). Childhood adversity and neural development: deprivation and threat as distinct dimensions of early experience. *Neurosci Biobehav Rev, 47*, 578-591. doi:10.1016/j.neubiorev.2014.10.012

McMillen, C., Auslander, W., Elze, D., White, T., & Thompson, R. (2003). Educational experiences and aspirations of older youth in foster care. *Child Welfare, 82*(4), 475-495.

McWilliams, L. A., Cox, B. J., & Enns, M. W. (2003). Use of the Coping Inventory for Stressful Situations in a clinically depressed sample: Factor structure, personality correlates, and prediction of distress 1. *Journal of clinical psychology, 59*(12), 1371-1385.

Mello, J. (2016). Life Adversity, Social Support, Resilience, and College Student Mental Health.

Mersky, J. P., Topitzes, J., & Reynolds, A. J. (2013). Impacts of adverse childhood experiences on health, mental health, and substance use in early adulthood: A cohort study of an urban, minority sample in the US. *Child Abuse & Neglect, 37*(11), 917- 925.

Michael, Bowers, ColleenTerzian, Hunsberger, B., & Bruce. (2000). Facilitaing the transition to university: evaluation of a social support discussion intervention program. *Journal of College Student Development,, 41*(4), 427.

Min, M. O., Singer, L. T., Minnes, S., Kim, H., & Short, E. (2013). Mediating links between maternal childhood trauma and preadolescent behavioral adjustment. *J Interpers Violence, 28*(4), 831-851. doi:10.1177/0886260512455868

Misra, R., & McKean, M. (2000). College students' academic stress and its relation to their anxiety, time management, and leisure satisfaction. *American Journal of Health Studies, 16*(1), 41 – 52.

Mohammed, S., & Abdel Kader, N. (2016). The relationship between stressful life events and quality of life of adolescent patients. *Egyptian Nursing Journal, 13*(3), 193-199. doi:10.4103/2090-6021.200181

Molina-Serrano, A., Linotte, S., Amat, M., Souery, D., & Barreto, M. (2008). Dissociation in major depressive disorder: a pilot study. *J Trauma Dissociation, 9*(3), 411-421.

Molnar, B. E., Buka, S. L., & Kessler, R. C. (2001). Child sexual abuse and subsequent psychopathology: results from the National Comorbidity Survey. *American Journal of Public Health, 91*(5), 753.

Morgan, A., & Ziglio, E. (2007). Revitalising the evidence base for public health: an assets model. *Promotion & Education, 14*(2_suppl), 17-22.

Morovati, S. M., & Rohani, T. N. (2008). Social support and self-care behaviors in diabetic patients referring to Yazd Diabetes Research Center. *ZAHEDAN JOURNAL OF RESEARCH IN MEDICAL SCIENCES* *9*(4), 275-284.

Morton, S., Mergler, A., & Boman, P. (2014). Managing the transition: The role of optimism and self-efficacy for first-year Australian university students. *Journal of Psychologists and Counsellors in Schools, 24*(1), 90-108.

Moutier, C., Norcross, W., Jong, P., Norman, M., Kirby, B., McGuire, T., & Zisook, S. (2012). The suicide prevention and depression awareness program at the University of California, San Diego School of Medicine. *Acad Med, 87*(3), 320-326. doi:10.1097/ACM.0b013e31824451ad

Mouton, C. P., Hargreaves, M. K., Liu, J., Fadeyi, S., & Blot, W. J. (2016). Adult Cancer Risk Behaviors Associated with Adverse Childhood Experiences in a Low Income Population in the Southeastern United States. *J Health Care Poor Underserved, 27*(1), 68-83. doi:10.1353/hpu.2016.0027

Muller, P. A. (2016). The Effects of Adversity on Depression among University Students. *Journal of Educational and Social Research, 6*(2). doi:Doi:10.5901/jesr.2016.v6n2p53

Munora, B. P., J. A. . (2009). Differences in resilience and University adjustment between school leavers and mature entry university students. *The Australian Community Psychologist, 21*(1), 50-61.

Nicholas J Talley, R. S. (2002). Irritable bowel syndrome: a little understood organic bowel disease? *THE LANCET, Vol 360*.

Nicpon, M. F., Huser, L., Blanks, E. H., Sollenberger, S., Befort, C., & Kurpius, S. E. R. (2006). The Relationship of Loneliness and Social Support with College Freshmen's Academic Performance and Persistence. *Journal of College Student*

Retention: Research, Theory & Practice, 8(3), 345-358. doi:10.2190/A465-356M-7652-783R

Nijenhuis, E. R., & van der Hart, O. (2011). Dissociation in trauma: a new definition and comparison with previous formulations. *J Trauma Dissociation, 12*(4), 416-445. doi:10.1080/15299732.2011.570592

Nunn, K. P. (1996). Personal hopefulness: a conceptual review of the relevance of the perceived future to psychiatry. *Br J Med Psychol, 69 (Pt 3)*, 227-245.

Nunn, K. P., Lewin, T. J., Walton, J. M., & Carr, V. J. (1996). The construction and characteristics of an instrument to measure personal hopefulness. *Psychol Med, 26*(3), 531-545.

Nurius, P. S., Logan-Greene, P., & Green, S. (2012). Adverse childhood experiences (ACE) within a social disadvantage framework: Distinguishing unique, cumulative, and moderated contributions to adult mental health. *Journal of prevention & intervention in the community, 40*(4), 278-290.

O'Malley, M., Voight, A., Renshaw, T. L., & Eklund, K. (2015). School climate, family structure, and academic achievement: a study of moderation effects. *Sch Psychol Q, 30*(1), 142-157. doi:10.1037/spq0000076

O'Mahen, H. A., Karl, A., Moberly, N., & Fedock, G. (2015). The association between childhood maltreatment and emotion regulation: two different mechanisms contributing to depression? *Journal of affective disorders, 174*, 287-295.

Ong, A. D., Edwards, L. M., & Bergeman, C. S. (2006). Hope as a source of resilience in later adulthood. *Personality and Individual Differences, 41*(7), 1263-1273.

Onno Van der Hart, & Barbara Friedman. (1989). A reader's Guide to Pierre Janet on Dissociation: A Neglected Intellectual Heritage In *Dissociation* (Vol. 2).

Othieno, C. J., Okoth, R. O., Peltzer, K., Pengpid, S., & Malla, L. O. (2014). Depression among university students in Kenya: Prevalence and sociodemographic correlates. *Journal of affective disorders, 165*, 120-125. doi:10.1016/j.jad.2014.04.070

Parlar, M., Frewen, P. A., Oremus, C., Lanius, R. A., & McKinnon, M. C. (2016). Dissociative symptoms are associated with reduced neuropsychological performance in patients with recurrent depression and a history of trauma exposure. *Eur J Psychotraumatol, 7*, 29061. doi:10.3402/ejpt.v7.29061

Pascarella, E. T. (2006). How college affects students: Ten directions for future research. *Journal of College Student Development, 47*(5), 508-520.

Pascarella, E. T., Seifert, T. A., & Whitt, E. J. (2008). Effective instruction and college student persistence: Some new evidence. *New directions for teaching and learning, 2008*(115), 55-70.

Pascarella, E. T., & Terenzini, P. T. (1991). *How college affects students: Findings and insights from twenty years of research*. Retrieved from

Patterson, G. R., DeBaryshe, B. D., & Ramsey, E. (1989). A developmental perspective on antisocial behavior. *Am Psychol, 44*(2), 329-335.

Paykel, E. S. (2003). Life events and affective disorders. *Acta Psychiatr Scand Suppl*(418), 61-66.

Perzow, S. E., Petrenko, C. L., Garrido, E. F., Combs, M. D., Culhane, S. E., & Taussig, H. N. (2013). Dissociative symptoms and academic functioning in maltreated children: a preliminary study. *J Trauma Dissociation, 14*(3), 302-311. doi:10.1080/15299732.2012.736928

Pfizer. (1999). The Patient Health Questionnaire (PHQ-9) - Overview.

Phinney, J. S., & Haas, K. (2003). The process of coping among ethnic minority first-generation college freshmen: A narrative approach. *The Journal of social psychology, 143*(6), 707-726.

Pidgeon, A., Rowe, N., Stapleton, P. & Magyar, H. . (2014). Examining characteristics of resilience among university students: An international study. *Open Journal of Social Sciences*(2), 14-22. doi:http://dx.doi.org/10.4236/jss.2014.211003

Pittman, L. D., & Richmond, A. (2008). University belonging, friendship quality, and psychological adjustment during the transition to college. *The Journal of Experimental Education, 76*(4), 343-362.

Post, R. M. (1992). Transduction of psychosocial stress into the neurobiology of recurrent affective disorder. *American Journal of Psychiatry, 149*(8), 999-1010.

Pratt, M. (2000). The Transition to University: Contexts, Connections, and Consequences. *Journal journal of adolescent research, 15*(1).

Prokopez, C. R., Cesoni, O. M., Caporusso, G. B., Reffino-Pereyra, M. L., Alberio, G., & Vallejos, M. (2018). Prevalence and clinical impact of childhood adversities in women with schizophrenia. *Clin Schizophr Relat Psychoses*. doi:10.3371/csrp.prce.061518

Pukay-Martin, N. D., Cristiani, S. A., Saveanu, R., & Bornstein, R. A. (2003). The relationship between stressful life events and cognitive function in HIV-infected men. *J Neuropsychiatry Clin Neurosci, 15*(4), 436-441.

Putnam, F. W., Carlson, E. B., Ross, C. A., Anderson, G., Clark, P., Torem, M., . . . Braun, B. G. (1996). Patterns of dissociation in clinical and nonclinical samples. *J Nerv Ment Dis, 184*(11), 673-679.

Rafiq, S., Campodonico, C., & Varese, F. (2018). The relationship between childhood adversities and dissociation in severe mental illness: a meta-analytic review. *Acta Psychiatr Scand, 138*(6), 509-525. doi:10.1111/acps.12969

Ramezankhani, A., Gharlipour, Z., Heydarabadi, A. B., Tavassoli, E., Motaleb, M., Barekati, H., . . . Moosavi, S. A. (2013). Perceived social support, depression, and perceived stress in university students. *Journal of Paramedical Sciences, 4*(4). doi:http://journals.sbmu.ac.ir/jps/article/viewFile/4846/4299

Rand, K. L., & Cheavens, J. S. (2009). Hope theory. *Oxford handbook of positive psychology, 323*, 333.

Rand, K. L., Martin, A. D., & Shea, A. M. (2011). Hope, but not optimism, predicts academic performance of law students beyond previous academic achievement. *Journal of Research in Personality, 45*(6), 683-686.

Rauer, A. J., Pettit, G. S., Lansford, J. E., Bates, J. E., & Dodge, K. A. (2013). Romantic relationship patterns in young adulthood and their developmental antecedents. *Developmental psychology, 49*(11), 2159.

Ray, W. J., & Lukens, S. (1995). *Dissociative, experiences and their relation to psychopathology ina college-age population*. Paper presented at the the annual meeting of the Society for Psychopathology Research, Iowa City, IA.

Rayle, A. D., Kurpius, S. E. R., & Arredondo, P. (2006). Relationship of Self-Beliefs, Social Support, and University Comfort with the Academic Success of Freshman College Women. *Journal of College Student Retention: Research, Theory & Practice, 8*(3), 325-343. doi:10.2190/R237-6634-4082-8Q18

Rehabilitation Measures Database. (2014). WHO Quality of Life-BREF (WHOQOL-BREF), Asseses quality of life (QOL) within the context of an individual's culture, value systems, personal goals, standards and concerns. .

Reivich, K., & Shatté, A. (2002). *The resilience factor: 7 essential skills for overcoming life's inevitable obstacles*: Broadway Books.

Repetti, R. L., Taylor, S. E., & Seeman, T. E. (2002). Risky families: family social environments and the mental and physical health of offspring. *Psychol Bull, 128*(2), 330-366.

Richards, J. M., & Gross, J. J. (2000). Emotion regulation and memory: the cognitive costs of keeping one's cool. *Journal of personality and social psychology, 79*(3), 410.

Richmond, L. D. P. a. A. (2008). University Belonging, Friendship Quality, and Psychological Adjustment during theTransition to College. *The Journal of Experimental Education, 76*(4), 343-361.

Roberts, S. J., Glod, C. A., Kim, R., & Hounchell, J. (2010). Relationships between aggression, depression, and alcohol, tobacco: Implications for healthcare providers in student health. *Journal of the American Academy of Nurse Practitioners, 22*(7), 369-375. doi:10.1111/j.1745-7599.2010.00521.x

Roca, V., Hart, J., Kimbrell, T., & Freeman, T. (2006). Cognitive function and dissociative disorder status among veteran subjects with chronic posttraumatic stress disorder: a preliminary study. *J Neuropsychiatry Clin Neurosci, 18*(2), 226-230. doi:10.1176/jnp.2006.18.2.226

Rogers, B. H. (1988). Educational Motivations of Part-Time Adults as Related to Socio-Demographic Variables. *College and University, 63*(2), 198-209.

Roh, M. S., Jeon, H. J., Kim, H., Han, S. K., & Hahm, B. J. (2010). The prevalence and impact of depression among medical students: a nationwide cross-sectional study in South Korea. *Acad Med, 85*(8), 1384-1390. doi:10.1097/ACM.0b013e3181df5e43

Rose, A. J., & Rudolph, K. D. (2006). A review of sex differences in peer relationship processes: potential trade-offs for the emotional and behavioral development of girls and boys. *Psychol Bull, 132*(1), 98-131. doi:10.1037/0033-2909.132.1.98

Rosenfeld, L. B., Richman, J. M., & Bowen, G. L. (2000). Social Support Networks and School Outcomes: The Centrality of the Teacher. *Child and Adolescent Social Work Journal, 17*(3), 205-226. doi:10.1023/A:1007535930286

Ross, C. A., & Anderson, G. (1991). The frequency of multiple personality disorder among psychiatric inpatients. *The American journal of psychiatry, 148*(12), 1717.

Ross, C. A., Anderson, G., Fleisher, W. P., & Norton, G. R. (1991). The Frequency of Multiple Personality-Disorder among Psychiatric-Inpatients. *American Journal of Psychiatry, 148*(12), 1717-1720.

Ross, C. A., Joshi, S., & Currie, R. (1990). Dissociative experiences in the general population. *Am J Psychiatry, 147*(11), 1547-1552. doi:10.1176/ajp.147.11.1547

Rudolph, K. D., & Flynn, M. (2007). Childhood adversity and youth depression: influence of gender and pubertal status. *Dev Psychopathol, 19*(2), 497-521. doi:10.1017/s0954579407070241

Rueger, S. Y., Malecki, C. K., Pyun, Y., Aycock, C., & Coyle, S. (2016). A Meta-Analytic Review of the Association Between Perceived Social Support and Depression in Childhood and Adolescence. *Psychol Bull, 142*(10), 1017-1067. doi:10.1037/bul0000058

Rutter, L. A., P. Weatherill, R., C. Krill, S., Orazem, R., & T. Taft, C. (2013). *Posttraumatic stress disorder symptoms, depressive symptoms, exercise, and health in college students*. Vol. 5.

Rutter, M. (1985). Resilience in the face of adversity. Protective factors and resistance to psychiatric disorder. *Br J Psychiatry, 147*, 598-611.

Rutter, M. (1987). Psychosocial resilience and protective mechanisms. *American journal of orthopsychiatry, 57*(3), 316-331.

Sable, M., Danis, F., Mauzy, D., & Gallagher, S. (2006). Barriers to Reporting Sexual Assault for Women and Men: Perspectives of College Students. *Journal of American college health : J of ACH, 55*, 157-162. doi:10.3200/JACH.55.3.157-162

Sachs-Ericsson, N., Blazer, D., Plant, E. A., & Arnow, B. (2005). Childhood sexual and physical abuse and the 1-year prevalence of medical problems in the National Comorbidity Survey. *Health Psychol, 24*(1), 32-40. doi:10.1037/0278-6133.24.1.32

Safree, M. A., & Dzulkifli, M. A. (2010). The Relationship between Social Support and Psychological Problems among Students. *International Journal of Business and Social Science, 1*(3).

Samm, A., Tooding, L. M., Sisask, M., Kolves, K., Aasvee, K., & Varnik, A. (2010). Suicidal thoughts and depressive feelings amongst Estonian schoolchildren: effect of family relationship and family structure. *Eur Child Adolesc Psychiatry, 19*(5), 457-468. doi:10.1007/s00787-009-0079-7

Sandberg, D. A., & Lynn, S. J. (1992). Dissociative Experiences, Psychopathology and Adjustment, and Child and Adolescent Maltreatment in Female College-Students. *Journal of Abnormal Psychology, 101*(4), 717-723. doi:Doi 10.1037//0021-843x.101.4.717

Sanders, B., & Giolas, M. H. (1991). Dissociation and childhood trauma in psychologically disturbed adolescents. *The American journal of psychiatry*.

Sanders, B., & Giolas, M. H. (1991). Dissociation and childhood trauma in psychologically disturbed adolescents. *Am J Psychiatry, 148*(1), 50-54. doi:10.1176/ajp.148.3.A50

Santini, Z. I., Koyanagi, A., Tyrovolas, S., Mason, C., & Haro, J. M. (2015). The association between social relationships and depression: A systematic review. *Journal of Affective Disorders, 175*, 53-65. doi:10.1016/j.jad.2014.12.049

Sara, A. (2011). Investigation of the relationship between social support, resilience and mental health of the students and veterans of Ilam. . *Veteran Medicine,, 12*(3), 48-58. .

Saxe, G. N., van der Kolk, B. A., Berkowitz, R., Chinman, G., Hall, K., Lieberg, G., & Schwartz, J. (1993). Dissociative disorders in psychiatric inpatients. *Am J Psychiatry, 150*(7), 1037-1042. doi:10.1176/ajp.150.7.1037

Scarf, D., Hayhurst, J. G., Riordan, B. C., Boyes, M., Ruffman, T., & Hunter, J. A. (2016). Increasing resilience in adolescents: the importance of social connectedness in adventure education programmes. *Australasian Psychiatry, 25*(2), 154-156. doi:10.1177/1039856216671668

Scarf, D., Moradi, S., McGaw, K., Hewitt, J., Hayhurst, J. G., Boyes, M., . . . Hunter, J. A. (2016). Somewhere I belong: Long-term increases in adolescents' resilience are predicted by perceived belonging to the in-group. *British Journal of Social Psychology, 55*(3), 588-599.

Schafer, I., & Fisher, H. L. (2011). Childhood trauma and posttraumatic stress disorder in patients with psychosis: clinical challenges and emerging treatments. *Curr Opin Psychiatry, 24*(6), 514-518. doi:10.1097/YCO.0b013e32834b56c8

Schauer, M., & Elbert, T. (2010). Dissociation Following Traumatic Stress Etiology and Treatment. *Zeitschrift Fur Psychologie-Journal of Psychology, 218*(2), 109-127. doi:10.1027/0044-3409/a000018

Schwenk, T. L., Davis, L., & Wimsatt, L. A. (2010). Depression, stigma, and suicidal ideation in medical students. *JAMA, 304*(11), 1181-1190.

Shapero, B. G., Black, S. K., Liu, R. T., Klugman, J., Bender, R. E., Abramson, L. Y., & Alloy, L. B. (2014). Stressful life events and depression symptoms: the effect of childhood emotional abuse on stress reactivity. *J Clin Psychol, 70*(3), 209-223. doi:10.1002/jclp.22011

Sheridan, M. A., & McLaughlin, K. A. (2014). Dimensions of early experience and neural development: deprivation and threat. *Trends Cogn Sci, 18*(11), 580-585. doi:10.1016/j.tics.2014.09.001

Sheridan, M. A., & McLaughlin, K. A. (2016). Neurobiological Models of the Impact of Adversity on Education. *Current opinion in behavioral sciences, 10*, 108-113. doi:10.1016/j.cobeha.2016.05.013

Shokri, O., Farhani, M. N., Kormi, N. R., & Moridi, A. R. (2013). Perceived social support and academic stress: The roles of gender and cultural differences.

Siperstein, G. N., Parker, R. C., Bardon, J. N., & Widaman, K. F. (2007). A national study of youth attitudes toward the inclusion of students with intellectual disabilities. *Exceptional Children, 73*(4), 435–455. doi:10.1177/001440290707300403

Siddique, I., Imtiaz, A., Haider, N., & Afzal, S. (2015). Prevalence Of Anxiety And Depression In Patients With Dissociative Disorders. *Journal Of Pakistan Psychiatric Society*, 21-23.

Singer, M. I., Anglin, T., Song, L., & Lunghofer, L. (1995). Adolescents' exposure to violence and associated symptoms of psychological trauma. *JAMA, 273*(6), 477-482. doi:10.1001/jama.1995.03520300051036

Sirri, L., Magelli, C., & Grandi, S. (2011). Predictors of perceived social support in long-term survivors of cardiac transplant: the role of psychological distress, quality of life, demographic characteristics and clinical course. *Psychol Health, 26*(1), 77-94. doi:10.1080/08870440903377339

Smith, N., Lam, D., Bifulco, A., & Checkley. (2002). Childhood Experience of Care and Abuse Questionnaire (CECA.Q). *Social Psychiatry and Psychiatric Epidemiology, 37*(12), 572–579. doi: https://doi.org/10.1007/s00127-002-0589-9

Snyder. (1995). Conceptualizing, measuring, and nurturing hope. *Journal of Counseling & Development, 73*(3), 355-360.

Snyder, Shorey, H. S., Cheavens, J., Pulvers, K. M., Adams III, V. H., & Wiklund, C. (2002). Hope and academic success in college. *Journal of educational psychology, 94*(4), 820.

Sokratous, S., Merkouris, A., Middleton, N., & Karanikola, M. (2013). The association between stressful life events and depressive symptoms among Cypriot university students: A cross-sectional descriptive correlational study. *BMC Public Health, 13*, 1121-1121. doi:doi: 10.1186/1471-2458-13-1121

Sole, M. L., Stuart, P. L., & Deichen, M. (2006). Web-based triage in a college health setting. *J Am Coll Health, 54*(5), 289-294. doi:10.3200/jach.54.5.289-294

Soukup, J., Papežová, H., Kuběna, A., & Mikolajová, V. (2010). Dissociation in non-clinical and clinical sample of Czech adolescents. Reliability and validity of the Czech version of the Adolescent Dissociative Experiences Scale. *European Psychiatry, 25*(7), 390-395.

Souri, H., & Hasanirad, T. (2011). Relationship between Resilience, Optimism and Psychological Well-Being in Students of Medicine. *Procedia - Social and Behavioral Sciences, 30*, 1541-1544. doi:http://dx.doi.org/10.1016/j.sbspro.2011.10.299

Southwick. S. M., M., C. A., Vythilingam, M., & Charney, D. (2006). Mentors enhance resilience in at-risk children and adolescents. *Psychoanalytic Inquiry, 26*(4), 577-584. doi:http://dx.doi.org/10.1080/07351690701310631

Spitzer, R. L., Williams, J. B., Gibbon, M., & First, M. B. (1992). The Structured Clinical Interview for DSM-III-R (SCID). I: History, rationale, and description. *Arch Gen Psychiatry, 49*(8), 624-629.

Stafford, M., McMunn, A., Zaninotto, P., & Nazroo, J. (2011). Positive and negative exchanges in social relationships as predictors of depression: evidence from the English Longitudinal Study of Aging. *J Aging Health, 23*(4), 607-628. doi:10.1177/0898264310392992

Stallman, H. M., & Shochet, I. M. . (2008). *University Connectedness Scale*. Retrieved from Brisbane: Queensland University of Technology:

Staniute, M., Brozaitiene, J., & Bunevicius, R. (2013). Effects of social support and stressful life events on health-related quality of life in coronary artery disease patients. *J Cardiovasc Nurs, 28*(1), 83-89. doi:10.1097/JCN.0b013e318233e69d

Stebleton, M. J., Soria, K. M., & Huesman Jr, R. L. (2014). First-generation students' sense of belonging, mental health, and use of counseling services at public research universities. *Journal of College Counseling, 17*(1), 6-20.

Steptoe, A., Tsuda, A., & Tanaka, Y. (2007). Depressive symptoms, socio-economic background, sense of con- trol, and cultural factors in university students from 23 countries. *International journal of behavioral medicine, 14*, 97–107.

Steptoe, A., Tsuda, A., Tanaka, Y., & Wardle, J. (2007). Depressive symptoms, socio-economic background, sense of control, and cultural factors in university students from 23 countries. *International journal of behavioral medicine, 14*(2), 97-107.

Stewart, S. M., Betson, C., Lam, T., Marshall, I., Lee, P., & Wong, C. (1997). Predicting stress in first year medical students: a longitudinal study. *Medical Education, 31*(3), 163-168.

Stice, E., Ragan, J., & Randall, P. (2004). Prospective relations between social support and depression: differential direction of effects for parent and peer support? *J Abnorm Psychol, 113*(1), 155-159. doi:10.1037/0021-843x.113.1.155

Struthers, C. W., Perry, R. P., & Menec, V. H. (2000). An examination of the relationship among academic stress, coping, motivation, and performance in college. *Research in higher education, 41*(5), 581-592.

Sterzing, P. R., Shattuck, P. T., Narendorf, S. C., Wagner, M., & Cooper, B. P. (2012). Bullying involvement and autism spectrum disorders: Prevalence and correlates of bullying involvement among adolescents with an autism spectrum disorder. *Arch Pediatr Adolesc Med, 166*(11), 1058–1064. doi:10.1001/archpediatrics.2012.790

Tahmasbipoura, & Taheri. (2012). A survey on the relation between social support and mental health in students Shahid Rajaee University. *Cyprus International Conference on Educational Research (Cy-Icer-2012), 47,* 5-9. doi:10.1016/j.sbspro.2012.06.603

Taylor, S. E., Way, B. M., Welch, W. T., Hilmert, C. J., Lehman, B. J., & Eisenberger, N. I. (2006). Early family environment, current adversity, the serotonin transporter promoter polymorphism, and depressive symptomatology. *Biological psychiatry, 60*(7), 671-676.

Thoits, P. A. (1995). Stress, coping, and social support processes: where are we? What next? *J Health Soc Behav, Spec No,* 53-79.

Thomas, C. L., Cassady, J. C., & Heller, M. L. (2017). The influence of emotional intelligence, cognitive test anxiety, and coping strategies on undergraduate academic performance. *Learning and Individual Differences, 55,* 40-48. doi:https://doi.org/10.1016/j.lindif.2017.03.001

Thomas, L. (2002). Student retention in higher education: the role of institutional habitus. *Journal of Education Policy, 17*(4), 423-442.

Thombs, Benedetti, A., Kloda, L. A., Levis, B., Nicolau, I., Cuijpers, P., & Ziegelstein, R. C. (2014). The diagnostic accuracy of the Patient Health Questionnaire-2 (PHQ-2), Patient Health Questionnaire-8 (PHQ-8), and Patient Health Questionnaire-9 (PHQ-9) for detecting major depression: protocol for a systematic review and individual patient data meta-ana. Systematic Reviews. *124*(3).

Thompson, D., Goebert, D., & Takeshita, J. (2010). A Program for Reducing Depressive Symptoms and Suicidal Ideation in Medical Students. *Acad Med, 85*, 1635-1639. doi:10.1097/ACM.0b013e3181f0b49c

Tobin, D. L., Holroyd, K. A., Reynolds, R. V., & Wigul, J. K. (1989). The hierarchical factor structure of the Coping Strategies Inventory. *Cognitive Therapy and Research, 13*, 343-361.

Tong, E. M., Fredrickson, B. L., Chang, W., & Lim, Z. X. (2010). Re-examining hope: The roles of agency thinking and pathways thinking. *Cognition and Emotion, 24*(7), 1207-1215.

Tusaie, K., Puskar, K., &Sereika, S. M. . (2007). A predictive and moderating model of psychosocial resilience in adolescents. *Journal of Nursing Scholarship, 39*(1), 54-60.

Tutkun, H., Sar, V., Yargic, L. I., Ozpulat, T., Yanik, M., & Kiziltan, E. (1998). Frequency of dissociative disorders among psychiatric inpatients in a Turkish University Clinic. *Am J Psychiatry, 155*(6), 800-805. doi:10.1176/ajp.155.6.800

Urquhart, B., & Pooley, J. A. (2007). The transition experience of Australian students to university: The importance of social support. *The Australian Community Psychologist, 19*(2), 78-91.

van der Hart, O., & Horst, R. (1989). The dissociation theory of Pierre Janet. *Journal of traumatic stress, 2*(4), 397-412. doi:10.1002/jts.2490020405

Van Mol, C. (2017). Improving web survey efficiency: the impact of an extra reminder and reminder content on web survey response. *International Journal of Social Research Methodology, 20*(4), 317-327. doi:10.1080/13645579.2016.1185255

van Veen, T., Wardenaar, K. J., Carlier, I. V., Spinhoven, P., Penninx, B. W., & Zitman, F. G. (2013). Are childhood and adult life adversities differentially associated with specific symptom dimensions of depression and anxiety? Testing the tripartite model. *J Affect Disord, 146*(2), 238-245. doi:10.1016/j.jad.2012.09.011

Vaux, A. (1988). *Social Support: Theory Research, and Intervention*. New York, NY: Prager: .

Vermetten, E., Dorahy, M. J., & Spiegel, D. (2007). *Traumatic dissociation: Neurobiology and treatment*: American Psychiatric Pub.

Vidourek, R. A. (2017). Emotional Abuse: Correlates to Abuse Among College Students. *Journal of Aggression, Maltreatment & Trauma, 26*(7), 792-803. doi:10.1080/10926771.2017.1308980

Villalonga-Olives, E., Rojas-Farreras, S., Vilagut, G., Palacio-Vieira, J. A., Valderas, J. M., Herdman, M., . . . Alonso, J. (2010). Impact of recent life events on the health related quality of life of adolescents and youths: the role of gender and life events typologies in a follow-up study. *Health Qual Life Outcomes, 8*, 71. doi:10.1186/1477-7525-8-71

Viner, R. M., & Barker, M. (2005). Young people's health: the need for action. *Bmj, 330*(7496), 901-903.

Vonderlin, R., Kleindienst, N., Alpers, G. W., Bohus, M., Lyssenko, L., & Schmahl, C. (2018). Dissociation in victims of childhood abuse or neglect: a meta-analytic review. *Psychol Med*, 1-10. doi:10.1017/s0033291718000740

Wagner, B. M., Compas, B. E., & Howell, D. C. (1988). Daily and major life events: a test of an integrative model of psychosocial stress. *Am J Community Psychol, 16*(2), 189-205.

Wagnild, G. (2009). A review of the Resilience Scale. *J Nurs Meas, 17*(2), 105-113.

Walker, & Satterwhite, T. (2002). Academic performance among African-American and Caucasian students: Is the family still important? *College Student Journal, 36*, 113-128.

Watson, S., Chilton, R., Fairchild, H., & Whewell, P. (2006). Association between childhood trauma and dissociation among patients with borderline personality disorder. *Australian and New Zealand Journal of Psychiatry, 40*(5), 478-481. doi:DOI 10.1080/j.1440-1614.2006.01825.x

Weber, S., Jud, A., & Landolt, M. A. (2016). Quality of life in maltreated children and adult survivors of child maltreatment: a systematic review. *Qual Life Res, 25*(2), 237-255. doi:10.1007/s11136-015-1085-5

Weidong, J., Guoquan, Z., Yaosheng, P., Shumin, Z., Daoliang, Y., & Guangyao, L., & Yongyong, S. . (2012). Relationship between resilience and social support, coping style of students in middle school. *European Psychiatry, 27*(2), 11-36.

Wethington, E., & Kessler, R. C. (1986). Perceived support, received support, and adjustment to stressful life events. *J Health Soc Behav*, 78-89.

Wethington, E., & Kessler, R. C. (1986). Perceived support, received support, and adjustment to stressful life events. *J Health Soc Behav, 27*(1), 78-89.

Wibrowski, C. R., Matthews, W. K., & Kitsantas, A. (2017). The role of a skills learning support program on first-generation college students' self-regulation, motivation, and academic achievement: A longitudinal study. *Journal of College Student Retention: Research, Theory & Practice, 19*(3), 317-332.

Williamson, D. E., Birmaher, B., Anderson, B. P., al-Shabbout, M., & Ryan, N. D. (1995). Stressful life events in depressed adolescents: the role of dependent events during the depressive episode. *J Am Acad Child Adolesc Psychiatry, 34*(5), 591-598. doi:10.1097/00004583-199505000-00011

Wilson, S. (2005). Improving retention and success: A case study approach for practical results. *Journal of College Student Retention: Research, Theory & Practice, 7*(3), 245-261.

Wintre, M. G., & Yaffe, M. (2000). First-Year Students' Adjustment to University Life as a Function of Relationships with Parents. *Journal of Adolescent Research, 15*(1), 9-37. doi:10.1177/0743558400151002

Wörfel, F., Gusy, B., Lohmann, K., Töpritz, K., & Kleiber, D. (2016). Mental health problems among university students and the impact of structural conditions. *Journal of Public Health, 24*(2), 125-133. doi:10.1007/s10389-015-0703-6

World Health Organisation. (1998). Development of the World Health Organisation WHOQOL-BREF quality of life assessment. *Psychological Medicine., 28*, 551-558.

World Health Organisation. (2016). *Preventing depression in the WHO European Region*. Retrieved from http://www.euro.who.int/__data/assets/pdf_file/0003/325947/Preventing-depression-2016.pdf?ua=1:

Wrzesniewski, K., & Chylinska, J. (2007). Assessment of coping styles and strategies with school-related stress. *School Psychology International, 28*(2), 179-194.

Yan, H., & Sellick, K. (2004). Symptoms, psychological distress, social support, and quality of life of Chinese patients newly diagnosed with gastrointestinal cancer. *Cancer Nurs, 27*(5), 389-399.

Yan, Q. Q., Jiao, W. Y., Lin, J., & Jiao, F. Y. (2009). [Effect of childhood physical and emotional abuse on psychological health in undergraduate students]. *Zhongguo Dang Dai Er Ke Za Zhi, 11*(8), 675-678.

Yen, C. F., Yang, M. S., Chen, C. C., Yang, M. J., Su, Y. C., Wang, M. H., & Lan, C. M. (2008). Effects of childhood physical abuse on depression, problem drinking and perceived poor health status in adolescents living in rural Taiwan. *Psychiatry and Clinical Neurosciences, 62*(5), 575-583.

Yorke, M. (2004). *Leaving early: Undergraduate non-completion in higher education*: Routledge.

Zhang, Y., Qu, B., Lun, S. S., Wang, D. B., Guo, Y., & Liu, J. (2012). Quality of Life of Medical Students in China: A Study Using the WHOQOL-BREF. *PLOS ONE, 7*(11). doi:ARTN e49714

10.1371/journal.pone.0049714

Zhou, E. S., Penedo, F. J., Lewis, J. E., Rasheed, M., Traeger, L., Lechner, S., . . . Antoni, M. H. (2010). Perceived stress mediates the effects of social support on health-related quality of life among men treated for localized prostate cancer. *J Psychosom Res, 69*(6), 587-590. doi:10.1016/j.jpsychores.2010.04.019

Zimet, Dahlem, Zimet, & Farley. (1988a). The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment, 52*, 30-41.

Zimet, Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988b). The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment, 52*(1), 30-41. doi:DOI 10.1207/s15327752jpa5201_2

Zimet, Powell, S. S., Farley, G. K., Werkman, S., & Berkoff, K. A. (1990). Psychometric Characteristics of the Multidimenational Scale of Perceived Social Support. *Journal of Personality Assessment, 55*((3 & 4)), 610-617.

Zimmerman, M. A. F., S. . (2005). Adolescent resilience: a framework for understanding healthy development in the face of risk. *Annual Public Health Review, 26*, 399-419. doi:DOI: 10.1146/annurev.publhealth.26.021304.144357

Zolkoski, S. M., & Bullock, L. M. . (2012). Resilience in children and youth: A review. *Children and Youth Services Review*(34).

Zubin, J., & Spring, B. (1977). Vulnerability: A new view of schizophrenia. *Journal of Abnormal Psychology, 86*(2), 103-126. doi:10.1037/0021-843X.86.2.103